CONESTOGA-ROVERS & ASSOCIATES

www.CRAworld.com

Draft Report

2014 Annual Monitoring Report and EW-1 Shutdown Pilot Study Report

Wausau Water Supply NPL Site
Wausau, Wisconsin

Conestoga-Rovers & Associates
1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112

March 2015 • 003978 • Report No. 34

Partners in Sustainability

Table of Contents

List of Figures
(Following Text)

List of Tables
(Following Text)

List of Appendices

Section 1.0 Introduction

Conestoga-Rovers and Associates (CRA) has prepared this 2014 Annual Monitoring Report for the Wausau Water Supply NPL Site (Site) in Wausau, Wisconsin, on behalf of the Wausau Group of Responsible Parties (Group). This Report presents the results of groundwater and extraction well monitoring at the Site during the fourth quarter of 2014. This report also presents the final quarter of supplemental data collected as part of the EW1 Shutdown Pilot Study[1].

1.1 History

The Group initiated remedial action at the Site in the early 1990s in accordance with the September 29, 1990, Record of Decision (ROD) and the Consent Decree (CD) entered with the court on January 24, 1991. The final remedial action at the Site consisted of two soil vapor extraction (SVE) systems to address the source areas and groundwater extraction and treatment, utilizing existing municipal production wells (CW3 and CW6) and a remediation well (EW1). The Site location is shown on Figure 1.1 and a Site plan is presented on Figure 1.2.

Source area remediation was accomplished by the installation of SVE systems at Marathon Electric[2] (West Bank) and Wausau Chemical (East Bank) in January 1994. The SVE system at Marathon Electric operated until April 1996, when the West Bank source remediation was approved as complete. The East Bank SVE system was modified in 1996 and continued to operate. In January 2001 the East Bank SVE system was shut down while evaluation for final closure occurred. The East Bank source remediation was approved as complete in 2007.

Groundwater remediation is provided through two existing municipal production wells (CW3 and CW6) and one extraction well installed at Marathon Electric (EW1). Air strippers, located at the Wausau water treatment plant, treat water from the municipal supply wells. Water from EW1 is also treated by air stripping (over riprap on the riverbank) before being discharged to the Wisconsin River.

EW1 stopped operating in July 2012 due to pump failure. Since EW1 has essentially completed its performance goal, the Group proposed a pilot study to confirm that the groundwater containment network of pumping wells will continue to be effective without the need for pumping at EW1. The EW1 Shutdown Pilot Study Work Plan proposal was submitted to the United States Environmental Protection Agency (EPA) on September 3, 2013. Via email, dated

1 EW1 Shutdown Pilot Study Work Plan, Wausau Water Supply NPL Site, Wausau, Wisconsin, CRA, September 2013.

2 Marathon Electric was acquired by Regal Beloit Corporation and is now doing business at the Wausau plant under the Regal Beloit name.

November 5, 2013, EPA requested that the supplemental data collection for the Pilot Study start during the 4th quarter of 2013, concurrent with the 2013 annual monitoring event.

The pumping rates for the three extraction wells were originally defined in the CD. In the Groundwater Flow Model report (CRA, May 1993), CRA established a range of pumping rates that would maintain capture of the groundwater plume. Subsequently, in an August 4, 1995 letter, the EPA approved a pumping configuration range for the three extraction wells. Those pumping rates were:

- CW3: 65 hours per week at 1,200 gallons per minute (gpm) to 100 hours per week at 1,100 gpm
- CW6: 85 hours to 100 hours per week at 1,400 gpm
- EW1: 800 to 900 gpm continuously

Additional groundwater remediation was provided by a groundwater extraction system operated by Wausau Chemical between 1985 and 1996 as an interim remediation measure. The extraction system at Wausau Chemical consisted of a series of shallow wells at the south end of the Wausau Chemical property. Groundwater from this system was treated by air stripping. This system was in addition to the requirements of the ROD or the CD and operation ceased in 1996.

From 1993 through 2000 groundwater monitoring was conducted according to the Monitoring Program Plan (CRA, 1994). The Monitoring Program Plan consisted of a complex system of monthly, quarterly, semiannual, and annual monitoring. In June 2000, the Groundwater Monitoring Plan replaced the Monitoring Program Plan as the approved groundwater monitoring program. The Groundwater Monitoring Plan consists of annual monitoring well sampling and quarterly sampling of EW1.

The Groundwater Monitoring Plan requires an annual report on the activities occurring the previous calendar year. This Report fulfills the requirement for 2014.

1.2 Monitoring Background

Groundwater monitoring at this Site is a combination of hydraulic and water quality monitoring designed to verify that the groundwater extraction wells are containing the contaminant plume and that groundwater quality is improving as a result of past source remedial actions and ongoing volatile organic compound (VOC) removal from the aquifer.

Groundwater remediation at the Wausau Site has been ongoing for over 20 years. Aquifer remediation progress is a slow process but contaminant concentrations have been reduced significantly at the Site. The aquifer has been monitored annually to show the downward trend of VOC concentrations in groundwater. Because of the time necessary to achieve groundwater remediation, containment of contaminated groundwater is the primary measurable and achievable short-term objective.

For the purpose of evaluation, groundwater monitoring at Wausau has been divided into two areas, the East Bank and the West Bank of the Wisconsin River, corresponding to the two original source areas. The river forms a natural hydraulic division of the Site. During 2014, two groundwater extraction wells were operated to contain and remove VOC contaminated groundwater. One extraction well is on the West Bank, (CW6) and one is on the East Bank (CW3) (see Figure 1.2).

1.3 Site Geology

The Site is underlain by glacial outwash and alluvial sediments that have filled in the pre-glacial stream valley in which the Wisconsin River now flows. This alluvial aquifer ranges from 0 to 160 feet thick and has an irregular base and lateral boundaries. The relatively impermeable bedrock that underlies the aquifer, and forms its lateral boundaries within the pre-glacial valley, defines the boundaries of the aquifer. Six production wells in the Site area provide drinking water for the City of Wausau. These wells are screened in the glacial outwash and alluvial sand and gravel deposits that underlie and are adjacent to the Wisconsin River.

1.4 Groundwater Cleanup Standards

The Groundwater Monitoring Plan was developed to monitor compliance with cleanup standards for the groundwater at the Site. The groundwater cleanup standards for the Site are the United States Environmental Protection Agency (USEPA) maximum drinking water contaminant levels (MCLs). The MCLs for the primary VOC contaminants of concern at the Site are:

- Trichloroethylene (TCE) 5 µg/L
- Tetrachloroethylene (PCE) 5 µg/L
- cis-1,2-Dichloroethylene (C12DCE) 70 µg/L
- Vinyl chloride 2 µg/L

Section 2.0 2014 Monitoring

The 2014 annual groundwater monitoring event was conducted on November 3rd and 4th. Monitoring was conducted in accordance with the Groundwater Monitoring Plan and the EW1 Pilot Study Work Plan, with the following exceptions:

- As reported in the 2000 Annual Monitoring Report, two monitoring wells (WC2 and W51A) are no longer monitored and they were abandoned in 2000.
- Also, as approved by the USEPA and Wisconsin Department of Natural Resources (WDNR) through the 2002 Annual Monitoring Report, the analysis of bis(2-ethylhexyl)phthalate at C4S and W53A was discontinued in 2003.
- Monitoring wells E24 and E24A were abandoned in 2012. Monitoring well E24AR was installed as a replacement. The well log for E24AR was provided in Appendix A of the 2012 Annual Monitoring Report.
- Monitoring well E23A was abandoned on September 23, 2014.
- Extraction well EW1 was not operating during 2014, thus, quarterly influent and effluent sampling was not conducted. However, a sample was collected from EW1 during sampling events conducted in May, August and November 2014.

2.1 EW1 Shutdown Pilot Study Monitoring

In addition to the annual monitoring scope of work, supplemental data were collected as proposed in the Pilot Study Work Plan. These data included:

- Collection of groundwater samples from monitoring wells E21 and IWD for VOC analysis
- Copies of City Treatment Plant analytical data for post-treatment VOC samples
- City well pumping rate summaries

2.2 Water Level Monitoring

Table 2.1 presents the groundwater elevation data measured on November 3 and 4, 2014. Water table contours based on these measurements are presented on Figure 2.1. Field staff measured water levels on the East Bank on November 3 while CW-3, the East Bank remediation well, was pumping. West Bank water levels were measured on November 4 while CW-6, the West Bank remediation well was operating. As explained above, EW1 was not operating during the November monitoring event. Water levels in the City production wells were measured with the assistance of City staff.

The East Bank contours are consistent with flow patterns observed in previous years. The East Bank flow patterns are controlled by the operation of CW3. The West Bank contours depict a large cone of influence created by CW6. Under normal pumping conditions, CW10 and CW11 would also show significant drawdown and would augment the cone of influence created by the West Well Field. However, due to low water demand, the City was only pumping CW6 on November 4. Under natural conditions, groundwater would flow toward and discharge to the Wisconsin River. Under existing conditions however, groundwater flows toward the City supply wells.

2.3 Groundwater Sampling

Annual groundwater sampling was conducted on November 3 and 4, 2014. Monitoring well samples were analyzed for the Site specific VOC list (see Table 2.2) by EPA Method 8260. A summary of the groundwater sampling event, including field parameter measurements, is presented in Table 2.3.

Groundwater sampling was conducted according to the Quality Assurance Project Plan, (CRA, February 1994) as amended by a June 11, 1999, letter to the USEPA. TestAmerica Laboratories, Inc. in North Canton, Ohio, analyzed all samples. Laboratory results will be submitted electronically in the Region V Electronic Data Deliverable (EDD) format for inclusion in the Region V EPA database. Copies of the laboratory report and data quality validation memoranda for the 2014 data are presented in Appendix A.

2.4 Extraction Well EW1 Sampling

EW1 did not operate during 2014. Thus, influent and post-treatment effluent samples were not collected. However, samples were collected from EW1 on May 20, 2014, August 12, 2014, and November 4, 2014, as part of the EW1 Shutdown Pilot Study. No VOCs were detected in those three samples, which is an indication that the change in groundwater flow direction on the West Bank, due to EW1 no longer operating, has shifted the contaminant plume in that area away from EW1.

Section 3.0 Operation and Maintenance

Operation and maintenance activities reported in this section cover the City production wells, groundwater monitoring wells, and the annual inspection of the paved surfaces in the East Bank source area.

3.1 Monitoring Well Inspection

All Site monitoring wells were inspected during the November 2014 monitoring round. An inspection form was used to document the following well conditions:

- Total depth
- Well ID
- Casing and grout condition
- Well cap condition
- Lock condition
- Concrete seal condition
- Ground condition (subsidence)

Table 3.1 presents the results of the inspection. The inspection indicated that all wells were in satisfactory condition. Minor maintenance issues such as bolt replacement on well covers and well IDs will be addressed during 2015.

3.2 City Production Wells

CW3 and CW6 operated as required in 2014 with minimal shutdowns or repairs. Table 3.2 presents 2014 pumping data for the six City wells. While only CW3 and CW6 are part of the remediation system, data for all City wells are presented, consistent with previous reports. The table shows, by month, the number of hours each well was operated, the number of gallons pumped from each well, and the average pumping rate while the pump was operating.

CW3 and CW6 operated on alternate schedules at rates that exceeded the operating requirements established by the USEPA approval letter dated August 4, 1995. CW3 operated for an average of 77.8 hours per week with an average pumping rate of 1,474 gpm, exceeding the requirements of 65 hours per week at 1,200 gpm.

CW6 operated for an average of 88.6 hours per week with an average pumping rate of 1,339 gpm. The average pumping rate was less than the requirement of 1,400 gpm, however the total gallons pumped during 2014 (370,142,500 gallons) was 99.7% of the requirement of 371,280,000 gallons (85 hours per week at 1,400 gpm for 52 weeks). Thus, the hydraulic containment provided by CW6 during 2014 was very close to the requirements of USEPA's August 4, 1995 letter. CW6 is scheduled for routine maintenance in 2015, which should increase the pumping rate and the total weekly discharge.

3.3 East Bank Source Area Pavement Inspection

The USEPA and WDNR approved final closure of the East Bank source remediation SVE system in September 2007. A requirement of the closure was an annual inspection of the paved areas surrounding the Wausau Chemical property, as described in the Pavement Cover and Building Maintenance Plan. The purpose of the inspection is to monitor the integrity of the paved areas of the property and make recommendations to minimize rainwater infiltration and prevent direct human contact with soils. In August 2009 the entire pavement area was repaved with new asphalt and the street adjacent to the west side of the property, North River Drive, was repaved by the City of Wausau. Also, an approximately 2,800 square foot addition, with concrete floor and roof, was added to the south end of the building in 2009-2010. Inspections conducted during 2014 found the pavement to be in good condition. A copy of the pavement inspection report is presented in Appendix B.

Section 4.0 Evaluation of Groundwater Data

The objectives of groundwater monitoring at the Site are to monitor the containment of the contaminant plume and the long-term improvement in groundwater quality.

Table 4.1 presents the laboratory results for monitoring well samples collected in October 2014. The data indicate that, in general, the VOC concentrations are stable or decreasing. For comparison purposes, Table 4.1 includes data reported previously during 2014 for the EW1 Shutdown Pilot Study. The November 2014 data are shown in the shaded cells. Figure 4.1 presents the total chlorinated VOC (TCVOC) data and TCVOC concentration contours that illustrate the plume configuration based on the November 2014 data.

4.1 West Bank

The primary chlorinated VOC found in the West Bank groundwater is trichloroethene (TCE), which was detected at 10 of the 12 West Bank monitoring wells, plus EW1 and City well CW6. The degradation product, cis-1,2-dichloroethene (C12DCE), was detected at eight locations, but all concentrations were less than 1.5 µg/L. Vinyl chloride was not detected on the West Bank. Monitoring wells with TCE concentrations greater than the MCL of 5 µg/L included R2D, C2S, W52, W53A, W54, and W55. The TCE concentration at CW6 (4.0 µg/L) was below the MCL (see Table 4.1). City wells CW10 and CW11 were not operating during the November sampling event. However, no VOCs were detected in samples collected from CW10 and CW11 in May and August 2014.

In the portion of the plume north of EW1, CVOCs are typically located in the deeper portion of the aquifer. Wells north of EW1 that exceeded the MCL for TCE included R2D, W55, W52, and C2S. C2S is a shallow aquifer well nested with R4D. Total CVOC concentrations at C2S were below 5 µg/L from 2002 through 2012. However, concentrations increased to levels that are slightly greater than 5 µg/L after EW1 stopped operating. This increase indicates that a portion of the impacted groundwater from the old landfill source area is migrating north to CW6 and the West Well Field. Prior to the shutdown of EW1, this portion of the groundwater plume would have been captured by EW1.

In the southern portion of the plume, in the vicinity of the old landfill, CVOCs are more prevalent in the shallower portion of the aquifer. Monitoring wells south of EW1 that exceeded the MCL for TCE included W53A and W54. W53A is in the old landfill source area and TCE concentrations have fluctuated between 5 µg/L to 40 µg/L over the last 20 years. Since 2011, W53A concentrations have increased to concentrations ranging between 54 µg/L to 88 µg/L. This corresponds to the shutdown of EW1 and is likely due to a reduced groundwater flow velocity in the vicinity of the well, due to the reduced gradient since EW1 was shut down. Given equal diffusion rates from the VOC source, the reduced groundwater velocity would result in higher VOC concentrations (i.e. a reduced volume of water with the same VOC mass would create a higher concentration). Thus the increased concentrations observed at W53A since 2011 are not likely due to changes within the source area, such as a new source point within the landfill, but are a result of less groundwater flux through the area.

VOC concentrations at W54 continued to show a sharp increase through 2014. With the change in groundwater flow patterns since EW1 stopped pumping, the higher concentrations at W54 indicate that the impacted groundwater in the area of the old landfill is migrating east toward CW3. The groundwater in that area may be influenced by both CW3 and CW6.

As described in previous Annual Monitoring Reports, historically there has been a remnant of higher TCE concentrations in the area of monitoring wells R2D and R3D. Prior to the installation of EW1, this remnant of higher concentrations was in the area of R2D, migrating north toward CW6. When EW1 began pumping, the flow gradient was reversed and over the past 20 years the remnant has been slowly drawn to the south toward EW1. The capture zone flow divide between CW6 and EW1 was near the R2D/R3D area. As such, groundwater in this area was in a stagnation zone. Also, as pumping rates and pumping schedules varied at EW1 and CW6, the capture divide moved back and forth, causing the plume remnant to occasionally switch flow direction, having the effect of minimal movement in one direction or the other. From 1997 through 2000, the TCE concentrations at monitoring well R3D increased as the remnant moved south from R2D. R3D concentrations then began decreasing as the remnant continued south to EW1. This trend later reversed as the pumping rate at EW1 declined from 2010 through 2012

and then EW1 was shutdown in mid-2012. This resulted in increasing TCE concentrations at R3D as a portion of the higher concentration remnant would have been recaptured by the pumping influence of the West Well Field and migrated north toward CW6.

The 2014 data indicate continued decline of VOC concentrations at R3D and increased concentrations at R2D. This suggests that the remnant of higher concentrations is moving north to CW6. The historical data for R2D, R3D, and R4D are presented below.

Total Chlorinated VOCs (µg/L)			
Year	***R2D***	***R3D***	***R4D***
1996	1600	2	540
1997	720	5	65
1998	320	580	55
1999	110	1200	33
2000	45	1800	58
2001	17	1500	13
2002	15	1200	36
2003	10	980	38
2004	11	899	51
2005	7.5	400	56.5
2006	8.2	490	42
2007	9.9	280	1.3
2008	6.5	180	13
2009	7.3	92	22.9
2010	6.2	195.7	25.7
2011	11	203.1	27.6
2012	6.4	20.7	4.9
Nov 2013	20	4.8	16.6
March 2014	18.2	73.7	NA
May 2014	19.1	4.7	7.89
August 2014	33.2	2.9	NA
Nov 2014	47.2	2.6	1.8

In the far north portion of the West Bank plume, within the capture area of City well CW6 (see Figure 4.1), the only detected VOCs are TCE and C12DCE and the concentrations have not changed significantly since the shutdown of EW1.

The overall areal extent of the West Bank contaminant plume has not changed significantly since EW1 was shutdown. Charts showing TCVOC concentrations for select West Bank wells are presented in Appendix C.

4.2 East Bank

East Bank VOC data are presented in Table 4.1. While tetrachloroethene (PCE) was the original contaminant on the East Bank, the presence of TCE, C12DCE, and vinyl chloride at concentrations that exceed the PCE concentration in many wells indicates an active natural biodegradation process. For example, at WW6, the C12DCE concentration was higher than the PCE and TCE concentrations combined.

PCE, or one of the daughter products, was detected at 10 of the 12 East Bank monitoring wells and at City well CW3 in 2014. Six of the monitoring wells had concentrations that exceeded the MCL of at least one VOC. The areal extent of the East Bank contaminant plume remained steady compared to 2013 (see Figure 4.1). Total CVOC concentrations from 2008 through 2014 for key East Bank wells are shown below:

Total Chlorinated VOCs (µg/L)							
Well	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***
WC3B	1.5	1,460/565.2[3]	1.24	2.26	3.47	0.26	6.31
WC5A	2.8	12.1	9.86	4.6	1.3	7.3	14.93
E24AR	1.0	13	20	1.4	3.86	22	222.5
E22A	ND	231.9	5.03	3.2	25.41	104.9	12.5
E37A	460	77.35	7.0	140.19	68.06	4.67	3.73
WW6	12	29.97	46.34	17.6	45.48	45.8	51.9
CW3	6.4	4.48	4.36	4.03	3.58	2.62	3.03
IWD	4.4	7.3	4.67	5.7	NA	3.3	2.8

The CVOC concentration decreased significantly at E22A, while E24AR increased considerably. The TCVOC concentration at E24AR was 222.5 µg/L in 2014, which is the highest concentration reported for that location since routine monitoring began in 1993. Since 2000, concentrations at E24AR have ranged from 1 to 22 µg/L. It is possible that there was a labeling or reporting error, but review of field notes and discussions with field personnel did not suggest a potential mix-up. Historically, monitoring wells E22A and E37A have exhibited similar concentration fluctuations. These fluctuations have been attributed to higher concentration parts of the plume that are flowing from the source area to CW3 where the East Bank groundwater is extracted and treated. Charts showing TCVOC concentrations for select East Bank wells are presented in Appendix C.

[3] WC3B was resampled on January 12, 2010, to confirm the October, 2009 result.

Monitoring well IWD is on an island in the Wisconsin River approximately midway between EW1 and CW3. IWD monitors the deep portion of the aquifer beneath the river. Prior to the installation of EW1, the capture zone of the East Bank municipal wells (CW3 and CW4) extended beneath the river to the west and captured a portion of the West Bank contaminant plume. The TCE detected at IWD is a remnant of the West Bank contamination. CW4 was removed from operation and EW1 began operating on the West Bank in 1990. This created a groundwater divide between CW3 and EW1 in the area of IWD, causing a stagnation zone and resulting in a TCE plume remnant that had generally remained in place since EW1 began pumping. Since 2006, IWD TCVOC concentrations have been slowly declining. A graph showing IWD TCVOC concentrations from 1994 through 2014 is presented in Appendix C. If EW1 remains shut down, the stagnation zone beneath the river will disappear and the plume remnant in the IWD area would be captured and removed by CW3. No VOCs were detected in the sample from monitoring well E21, which is between IWD and CW3. This indicates that the West Bank plume does not currently extend all the way across the river at detectable concentrations (see Figure 4.1).

The 2014 concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) at monitoring well FVD5 were consistent with historical data. The aromatic compounds found in this well are related to the Wausau Energy property which is independent of the Wausau NPL site remediation process.

4.3 EW1

EW1 did not operate during 2014, hence, influent and post-treatment effluent samples were not collected. Grab samples were collected from EW1 during the second, third, and fourth quarters of 2014. No chlorinated VOCs were detected in any of the samples.

4.4 Hydraulic Capture

Hydraulic capture of the contaminant plume is demonstrated by the water table contours illustrated on Figure 2.1. The water table contours indicate that groundwater flow at the Site was toward the two operating extraction wells (CW3 and CW6). At nested well locations, the water table elevations for shallow and deep wells were similar, indicating horizontal flow and hydraulic containment of the shallow and deeper portions of the aquifer. Figure 4.1 also demonstrates that hydraulic containment of the contaminant plume was maintained through 2014.

Section 5.0 EW1 Shutdown Pilot Study

The EW1 Shutdown Pilot Study was initiated with the fall, 2013, monitoring event and continued through each quarter of 2014 for a total of five monitoring events. The monitoring was conducted in accordance with the approved schedule presented in the EW1 Shutdown Pilot Study Work Plan. Table 5.1 presents the monitoring plan for the five quarters of pilot study monitoring. The results of the first four monitoring events were presented in quarterly reports submitted to EPA and WDNR. The results of the fourth quarter 2014 monitoring are summarized below and conclusions are presented in Section 5.2.

5.1 EW1 Shutdown Pilot Study Data Collection

Supplemental data were collected during the November 2014 sampling event as proposed in the Pilot Study Work Plan. These data included:

1. Collection of groundwater samples from monitoring wells E21 and IWD for VOC analysis. These data were reported in Section 4.2 above. The November 2014 TCVOC concentration for IWD was 2.8 µg/L, which is the lowest concentration since 2002. No VOCs were detected in the sample from monitoring well E21, which is between IWD and CW3.
2. Collection of samples from West Well Field water supply wells in addition to CW6. The priority supply well on the West Bank is CW6. When additional water is required, CW10 and CW11 are also used. As proposed in the Pilot Study Work Plan, the intention was to collect a sample of the combined CW10 and CW11 influent at the City's treatment plant, prior to treatment. However, there is no sample port at the treatment plant for West Well Field influent. Neither CW10 nor CW11 were running during the November 2014 sampling event. Thus, no additional samples were collected from the West Well Field.
3. Obtain copies of City Treatment Plant analytical data for post-treatment VOC samples. The City Treatment Plant collects samples of the City water supply on a quarterly basis. The samples are collected at two exit points where the treated water leaves the plant. The results for samples collected in March, June, September, and October 2014 are presented in Appendix D. The only VOCs detected during 2014 were chloroform and bromodichloromethane. Neither of these compounds are associated with the Site groundwater contamination and both are common drinking water disinfection byproducts.
4. Obtain City well pumping rate summaries. These data were reported in Section 3.2 above and in Table 3.2. CW3 pumping rates exceeded the requirements of 65 hours per week at 1,200 gpm. CW6 operated for an average of 88.6 hours per week with an

average pumping rate of 1,339 gpm. The total-gallons-pumped by CW6 during 2014 was 99.7% of the requirement established by USEPA. CW6 is scheduled for routine maintenance in 2015, which should increase the pumping rate and the total weekly discharge.

5.2 EW1 Shutdown Pilot Study Conclusions

The Pilot Study was designed to provide data to detect or confirm aquifer conditions in six principal areas:

1. **Plume Containment**: Water level data collected since EW1 was shut down in mid-2012, indicate that the VOC plumes on both sides of the river are contained by the pumping of the City water supply wells in the West Well Field and at CW3 on the East Bank. The five quarters of water level data collected during the pilot study confirm that the capture zones created by the City wells are consistent and effective at containment and removal of the contaminant plumes. Groundwater contour figures for each quarter during the pilot study are presented in Appendix E.
2. **No Groundwater Receptors**: No private wells have been identified in the area of groundwater contamination and there are City ordinances that will prevent the installation of wells in the areas near the Superfund Site. Institutional controls are evaluated further in Section 6.0.
3. **Safe City Water Supply**: Groundwater pumped by the municipal wells is treated by air stripping and is also blended with un-impacted groundwater to ensure a safe water supply. Current influent concentrations at CW3 and CW6 (prior to treatment) are below the Wisconsin and Federal drinking water standards. In addition to the groundwater monitoring conducted for the Superfund Site, the City monitors the post-treatment water supply by performing quarterly sampling and analyses.
4. **Remediation of R3D Stagnation Area**: As described in Section 4.1, the aquifer in the R3D area was near the flow divide between EW1 and CW6 (Figure 4.1). Over the remediation history, aquifer flushing of VOCs in the R3D area has been slower than other areas because this area was in a stagnation zone. Data collected from R2D, R3D, R4D, W52, and W55 over the last five quarters are consistent with plume migration to the north toward CW6. VOC concentrations have declined at R3D while increasing at R2D. Groundwater elevations and contours, as shown on the drawings in Appendix E, suggest that the flow divide between CW6 and CW3 is south of R3D in the approximate area of R4D, which is approximately 500 to 700 feet south from where the flow divide was when EW1 was operating. Thus, groundwater north of the R4D area will be captured by CW6.

5. **Continued Remediation of EW1 Area**: As illustrated on the groundwater contour figures presented in Appendix E, the West Bank aquifer south of EW1 appears to be in the capture zone of CW3. Groundwater flow from this area will likely be to the east-southeast beneath the river and eventually to CW3 where it will be removed and treated by the City Water Treatment Plant. Since it is near the flow divide between CW3 and CW6, a portion of the aquifer in this area may be captured by CW6 and flow north.

   In the vicinity of the old landfill, CVOCs are more prevalent in the shallower portion of the aquifer. W53A is in the old landfill source area and TCE concentrations have increased slightly since the shutdown of EW1. As explained in Section 4.1, this is likely due to a decreased groundwater flow velocity. VOC concentrations at W54 have increased sharply since 2012 (see chart in Appendix C), from "non-detect" to 96 µg/L in November 2014. This is due to the change in groundwater flow patterns since EW1 stopped pumping. The higher concentrations at W54 indicate that the impacted groundwater on the north side of the old landfill is migrating east toward CW3.

   Total CVOC concentrations at C2S were below 5 µg/L from 2002 through 2012. However, concentrations increased to levels that are slightly greater than 5 µg/L after EW1 stopped operating. This may be a temporary increase, but it suggests that a portion of the impacted groundwater from the old landfill source area is migrating north to CW6 and the West Well Field. Prior to the shutdown of EW1, this portion of the groundwater plume would have been captured by EW1.

   Monitoring wells IWD and E21 were sampled during the pilot study to monitor potential increases in CVOC concentrations due to West Bank plume migration beneath the river toward CW3. No concentration increases were observed at either location. TCE and C12DCE were detected at IWD, but the concentrations were less than the State and Federal drinking water standards. VOCs were not detected at E21.

6. **Continued Remediation of East Bank Plume**: The shutdown of EW1 does not impact the continued remediation of the East Bank plume. Groundwater on the East Bank is controlled by the pumping of CW3 and the East Bank plume is completely within the capture area of CW3.

EW1 was installed in 1990 to remove a hot spot of groundwater contamination and the hot spot has been removed. By 2006, the reduction of VOCs at EW1 had flat lined with TCVOC concentrations less than 10 µg/L (see the EW1 chart in Appendix C), but operation of the well continued because VOC concentrations at certain monitoring wells still exceeded the cleanup standards.

EW1 has accomplished its performance goal, which was to prevent the migration of high concentrations of VOCs in the source area groundwater to the West Well Field. Given that the current groundwater VOC concentrations near the former source area are much lower, and that EW1 lies within the capture area of other extraction wells, continued operation of EW1 is not critical relative to the protection of potential groundwater receptors.

Through a combination of more than 20 years of groundwater remediation, source area remediation, institutional controls, and continued hydraulic control and treatment of the remaining plume by CW6 and CW3, the shut down EW1 has not created additional exposure risk to human health or the environment. To summarize:

1. The potential for higher VOC concentrations to migrate from west side source areas to the West Well Field has been eliminated by more than 20 years of EW1 operation and SVE remediation of the former municipal landfill.
2. City Treatment Plant sample results do not indicate potential impact due to contaminated groundwater. The west side plume is captured by CW6 and CW3. CW6 creates a hydraulic barrier to protect the other West Well Field supply wells.
3. Institutional controls maintained by the City of Wausau restrict the installation of private wells and can require abandonment of existing wells. Although well surveys indicate that there are no private wells near the Site.

Thus, the continued operation and associated expense of EW1 is no longer necessary and permanent shut down of EW1 is requested.

Section 6.0 Institutional Controls Evaluation

The subject properties of the three RPs are on both sides of the river. City of Wausau properties that are subject to the provisions of the ROD include the City Water Treatment Plant, City Well CW6, and City Well CW3. The following provides location and parcel information for the RP properties. The parcels are also depicted on Figure 6.1.

- Wausau Chemical property is on 3.3 acres lying south of Wausau Avenue, east of N. River Drive, and west of railroad tracks. The property is currently listed as one parcel with property identification number (PIN) 291-2907-252-0987.
- City of Wausau Water Treatment Plant property is on 6.2 acres, lying directly south of Wausau Chemical, east of N. River Drive, and west of the railroad. PIN 291-2907-252-0996.

- City of Wausau City Well CW3 is east of the river on 0.03 acres at 205 E. Union Avenue. PIN 291-2907-243-0982.
- City of Wausau City Well CW6 is west of the river on 1.92 acres at 1531 Pearson Street. PIN 291-2907-242-0961.
- Regal Beloit property is on 39 acres lying south of Randolph Street, east of Cherry Street, and west of the Wisconsin River. The property comprises two parcels, a 37 acre parcel: PIN 291-2907-234-0996 and a 2 acre parcel: PIN 291-2907-234-0998.

This IC evaluation was conducted in accordance with guidance provided by USEPA in their Memorandum to File dated July 24, 2013. The IC evaluation information is provided as responses to the specific topics and questions presented below.

1. ***Description of the areas where groundwater exceeds the performance standards (areas which will not allow Unlimited Use/Unrestricted Exposure).***

   Based on groundwater VOC data reported over the past five years, the areas where the groundwater cleanup performance standards have been exceeded are shown on Figure 6.1.

2. ***Description of existing ICs and IC objectives that ensure protection of human health and the environment.***

   The existing ICs and IC objectives include property deed restrictions and City ordinances. These are summarized in Table 6.1.

3. ***Explanation and documentation of private water well surveys conducted in the area and planned follow-up actions, if any.***

   A private water well survey was conducted in the area outlined on Figure 6.2. City of Wausau personnel searched their private well database in May of 2013 and did not locate any wells within the area. The City database is maintained and updated continuously. The City does not permit water wells to be drilled in the Site area.

   CRA also searched the Wisconsin Water Well Database (January 2012, Gen Ver 4.0) and no wells were located within the area.

4. ***Demonstrate that governmental controls are currently in effect by providing a current dated and official copy of existing governmental controls (ordinance, statutes etc.) that implement the IC objectives for the restricted areas. Identify any sunset provisions in the governmental control.***

   The City of Wausau Municipal Code contains a Wellhead Protection ordinance in Chapter 23.54 and also a Private Water Well ordinance in Chapter 19.30. The Private Water Well ordinance gives the City the authority to deny applications for groundwater wells, to regulate installation of wells, and to require abandonment of

existing groundwater wells. The Wellhead Protection ordinance prevents certain activities within a delineated area that could potentially increase the risk of groundwater contamination. These ordinances do not contain any sunset provisions regarding notification of WDNR or EPA upon potential revocation. The boundaries of the Wellhead Protection Area (WHPA) in the area of the Site are depicted on Figure 6.1. Copies of the City ordinances are presented in Appendix F.

5. ***Evaluate whether existing governmental controls cover the entire area that needs to be restricted, including information used to depict the restricted area covered by the control (is the restricted area and control based on reliable and up to date information, data and maps?)***

   The Site and CVOC plumes are completely within the City limits, thus the governmental controls cover the entire area that needs to be restricted.

6. ***Provide Map and GIS information of restricted areas including area where groundwater exceeds performance standards and area remediated to Site cleanup standards based on current and up to date monitoring data.***

   A map showing the Site, RP properties, and areas where groundwater concentrations exceed the Site cleanup standards is presented on Figure 6.1 and provided in GIS format on the enclosed CD.

7. ***Provide Map and GIS information of the areas regulated by governmental controls.***

   A map showing the Site, RP properties and WHP Overlay District is presented on Figure 6.1 and provided in GIS format on the enclosed CD.

8. ***Provide maps and GIS that overlay the information of 6 and 7 above.***

   A map showing the Site, RP properties, and WHP Overlay District is presented on Figure 6.1 and provided in GIS format on the enclosed CD.

   The GIS files conform to the following guidelines:

   - Identification of site boundaries, property ownership, and assessor's parcel numbers.
   - GIS coordinates are formatted into an ESRI polygon-shape file. The shape file was projected into the UTM, NAD 83 projection system, UTM zone.
   - Attribute names are included with the shape file for each polygon submitted.

The following assessment evaluates and documents monitoring and compliance with Institutional Controls.

1. ***How, when, and by whom is compliance with the institutional controls monitored?***

   The Site is inspected by the RPs consultant on an annual basis. Should any source area disturbances be noted, this information would be reported to EPA and WDNR. EPA also conducts Site inspections on a regular basis. Wausau Chemical personnel are aware of the deed restrictions on their property. They perform routine inspections of the asphalt cover and perform repairs when necessary. Regal Beloit personnel are aware of the former landfill beneath their property and, although there is no specific use restriction in their deed, will notify EPA and WDNR prior to conducting subsurface works in that area.

   The City of Wausau enforces the City ordinance that requires a permit for the installation of new water wells within the City limits. The Inspection Department's Plumbing Inspector is responsible for doing inspections, issuing permits, and sending compliance/abandonment letters, etc. Records of these activities are kept in the Inspections Department. The City does not issue permits for wells within the Superfund Site area.

   Well permit files are kept in the Inspections Department. A summary spreadsheet of active and abandoned wells and associated permits is also maintained by the Utilities Coordinator.

2. ***Are the results of the IC monitoring routinely and promptly shared with EPA and the State of Wisconsin?***

   The annual monitoring report, which is submitted to EPA and WDNR, includes the results of Site and property inspections.

3. ***Are measures in place to ensure that modifications to the restrictions require EPA and State approval?***

   There are no statements in the Consent Decree, ROD, or Remedial Scope of Work addressing approvals for modifications to the property restrictions. There are no sunset clauses in the City ordinances that require notification of WDNR and EPA if the ordinances are revoked or modified. The deed restriction on WCC property includes a requirement that the existing pavement shall not be removed without the approval of WDNR.

4. ***Do EPA and/or the State have a Memorandum of Understanding with the governmental entity?***

   The City of Wausau is one on the RPs and, as such, is subject to the provisions of the Consent Decree and ROD; thus a MOU is not necessary.

5. ***Is the property being used in a manner consistent with the restrictions?***

   The operations and usages of the source properties have not changed since the ROD was signed. The properties are zoned and utilized for industrial/commercial operations.

6. ***Provide a summary of the results of Site inspections and interviews with owners, lessees and other holders of property interests (are owners, lessees and other holders of property interests aware of and complying with the restrictions?)***

   Site inspections are conducted at least once annually. Recent inspections were conducted on October 1 and November 10, 2014. No significant issues were identified. Wausau Chemical asphalt cover inspections were conducted by WCC personnel. Inspection results are presented in Section 3.0 of this monitoring report.

7. ***Where can information be obtained about the governmental control (ordinance, code)? How do affected parties such as homeowners, contractors and resource users obtain information about the governmental control?***

   Wausau City ordinances and codes are available to the public at City Hall, City libraries and on the City's website. Affected parties obtain information through the City's permitting requirements.

8. ***Are affected parties and resource users aware of and understand the IC restrictions?***

   Local well drillers are made aware of the well drilling restrictions through the City's well permitting process. WCC management personnel are aware of their property deed restrictions.

9. ***Have there been breaches of IC use restrictions. If so, how were they addressed by the governmental agency?***

   The City is not aware of any breeches of ordinances.

The following describes the effectiveness of groundwater ICs.

1. ***Assess whether the controls are effective in the short term in maintaining objectives/restrictions/performance standards in Table 6.1.***

   Current ICs are effective. Water wells cannot be installed within the City limits without obtaining a permit from the City and the City can require the sealing and abandonment of existing wells, although there aren't any known existing wells in the area of the CVOC plumes.

2. ***Assess whether the control will be effective in the long term in maintaining the objectives/restrictions/performances standards in Table 6.1.***

ICs are effective in the long term because the deed restriction on WCC property will stay with the property. The applicable City ordinances apply City-wide and are not likely to be revoked.

3. ***Discuss whether existing ICs are preventing exposure*.**

Potential exposure to CVOC impacted groundwater is prevented because there are no private water wells within the area of the CVOC plume. The engineered barrier (asphalt) at WCC prevents potential direct contact with impacted soils (if any) and prevents potential leaching of CVOC in soils to groundwater. The potential for exposure due to possible vapor intrusion will continue to decrease as the groundwater plumes are remediated.

4. ***Discuss whether land and/or resource use has changed since execution of the ROD.***

Land use has not changed since execution of the ROD. Source properties are being utilized for the same industrial/commercial operations.

5. ***Is current or expected land use consistent with the City or County Master Plan?***

Current land use, zoned industrial, is consistent with the current master plan.

Does the property owner have any plans to sell or transfer the property?

WCC and the City of Wausau are in preliminary discussions regarding potential residential use of WCC property in the future. However, the City's master plan will not be revised unless this potential property transfer is realized.

Are there any new developments, either constructed or planned, in the area?

No changes to the zoning districts or property uses are anticipated at this time and there are no new construction permits pending. WCC and the City are in preliminary discussions regarding potential residential use of WCC property in the future.

6. ***Discuss how the current land and resource uses relate to exposure assumptions and risk calculations.***

Land uses have remained industrial/commercial, thus exposure and risk assumptions are consistent with the original assumptions described in the Consent Decree. The groundwater resource is utilized only by the City. CVOC impacted groundwater is treated to be protective of residential exposure levels.

7. ***Discuss whether there are any unintended consequences resulting from the use of a particular restriction.***

Not aware of any unintended consequences.

Based on the results of the IC evaluations proposed above, recommendations may be made if there are any identified deficiencies in the current communication, implementation, or compliance with the ICs.

Based on the information presented herein, the only potential identified deficiency is the lack of a mechanism to ensure that proposed modifications to the restrictions are approved by EPA and WDNR. This deficiency could be resolved by adding a requirement to the Site O&M Plan that the restrictions be reviewed annually and, if any proposed modifications are identified, EPA and WDNR would be notified for evaluation and potential approval.

Potential modifications to the IC monitoring requirements and the Operation and Maintenance Plan may be proposed to ensure that ICs are maintained and complied with in the short term and in the long term. A modified monitoring plan would include a schedule and an annual certification to EPA that ICs are in place and remain effective.

A revised O&M Plan is currently being prepared. The new O&M Plan will include a scheduled certification that ICs are in place and effective.

Section 7.0 Site Monitoring Plan

The current Site monitoring plan includes an annual monitoring event that is conducted during the third quarter. This monitoring event includes measurement of water levels at all Site monitoring wells (56 total) and groundwater sampling of 12 East Bank wells and 13 West Bank wells. Samples are also collected from City Wells CW3 and CW6. All groundwater samples are analyzed for the Site specific VOC list by EPA Method 8260. Table 7.1 summarizes the current monitoring plan. During the monitoring event, all wells are inspected to document their condition, including: total depth, casing and grout, well ID, well cap, lock, concrete seal, and ground (subsidence).

When EW1 was operating, monitoring was conducted quarterly. Pre-treatment and post-treatment water samples were collected and analyzed for Site specific VOCs.

7.1 Proposed Monitoring Plan Modifications

Many of the Site monitoring wells are clustered in groups of two or three wells in which only one of the group is monitored for water quality. Numerous years of water level monitoring has shown that there is very little vertical gradient and groundwater flow is mostly horizontal. Thus clustered wells are not necessary for determining groundwater flow patterns. As such, several

wells on the East Bank and West Bank are redundant and are proposed for removal from the monitoring plan. These wells are listed below with the justification for their elimination.

East Bank

The East Bank plume is situated primarily in the shallow portion of the aquifer. Thus, where wells are clustered, the shallower wells are sampled for VOC analysis and the deeper wells generally do not provide needed data.

E22 – is not sampled because it is clustered with E22A and it is not needed for groundwater elevation data.

E26 – neither E26 nor E26A are sampled and only E26A is useful for groundwater elevation data.

MW10A – 10A and 10B are a cluster that monitor the aquifer upgradient from the source. Both wells are sampled for VOC analysis. Only the shallower well, MW10B, is needed for chemical and water level data.

WC3 – is not sampled because it is clustered with WC3B and it is not needed for groundwater elevation data.

WC4 – is the deeper well of the WC4/WC4A cluster; neither well is sampled for VOC analysis and only WC4A is needed for elevation data.

WC5 - is not sampled because it is clustered with WC5A and it is not needed for groundwater elevation data.

IWD – to be replaced in the sampling plan by E21, IWD is on an island in the Wisconsin River and is a deep well that was installed to monitor the West Bank contaminant plume that had migrated beneath the river toward CW3. VOC concentrations at this well have been decreasing and have not exceeded the Site cleanup standards since 2009. In order to sample IWD, a boat must be rented to ferry supplies and personnel to the island. There is no dock or beach on the island to safely unload and disembark. Given these safety concerns and the low VOC concentrations at this location, it should be removed from the monitoring plan. E21, which is adjacent to the river on the East Bank, and is screened at the same depth as IWD, is a good substitute for IWD and would be added to the annual sampling list to monitor potential VOC migration from the West bank to CW3.

E23A – was abandoned in the fall of 2014 due to new construction on the property at N 2nd Street and Wausau Ave.

E24 and E24A – were abandoned in the spring of 2013 due to new construction at the Bridge Community Clinic on N. 2nd Street. E24A was replaced by E24AR, which is monitored for VOC analysis and groundwater elevation.

West Bank

The West Bank plume is situated primarily in the shallow portion of the aquifer near the source area, but descends into the deeper aquifer as it migrates to City wells CW6 or CW3. Thus, where wells are clustered, the shallower wells are sampled for VOC analysis near the source and the deeper wells are sampled away from the source area.

C4D – is the deeper well of a cluster with C4S. These wells monitor the aquifer upgradient from the West Bank source. C4S is sampled for VOC analysis, thus C4D is not needed for chemical or water level data.

MW4B – is the shallower well of a cluster that is near CW6. Neither well in the cluster is sampled for VOC analysis and only MW4A is needed for groundwater elevation data.

R2S - is the shallower well of a cluster that is approximately midway between the source and CW6. R2S is not sampled for VOC analysis and is not needed for groundwater elevation data.

R3S – is the shallow well in a cluster with R3D and W50. R3S is a dry well that does not provide chemical or elevation data.

W50 – is a mid-level well clustered with R3D and R3S. It is not used for VOC sampling and it is not needed for elevation data.

W52A – is the shallow well clustered with W52. It is not used for VOC sampling and it is not needed for elevation data.

W53 – is a deep well in the source area clustered with W53A. It is not used for VOC sampling and it is not needed for elevation data.

W55A - is the shallow well clustered with W55, near CW6. It is not used for VOC sampling and it is not needed for elevation data.

WSWS - is adjacent to the Wisconsin River and is the shallow well clustered with W55. It is not used for VOC sampling and it is not needed for elevation data.

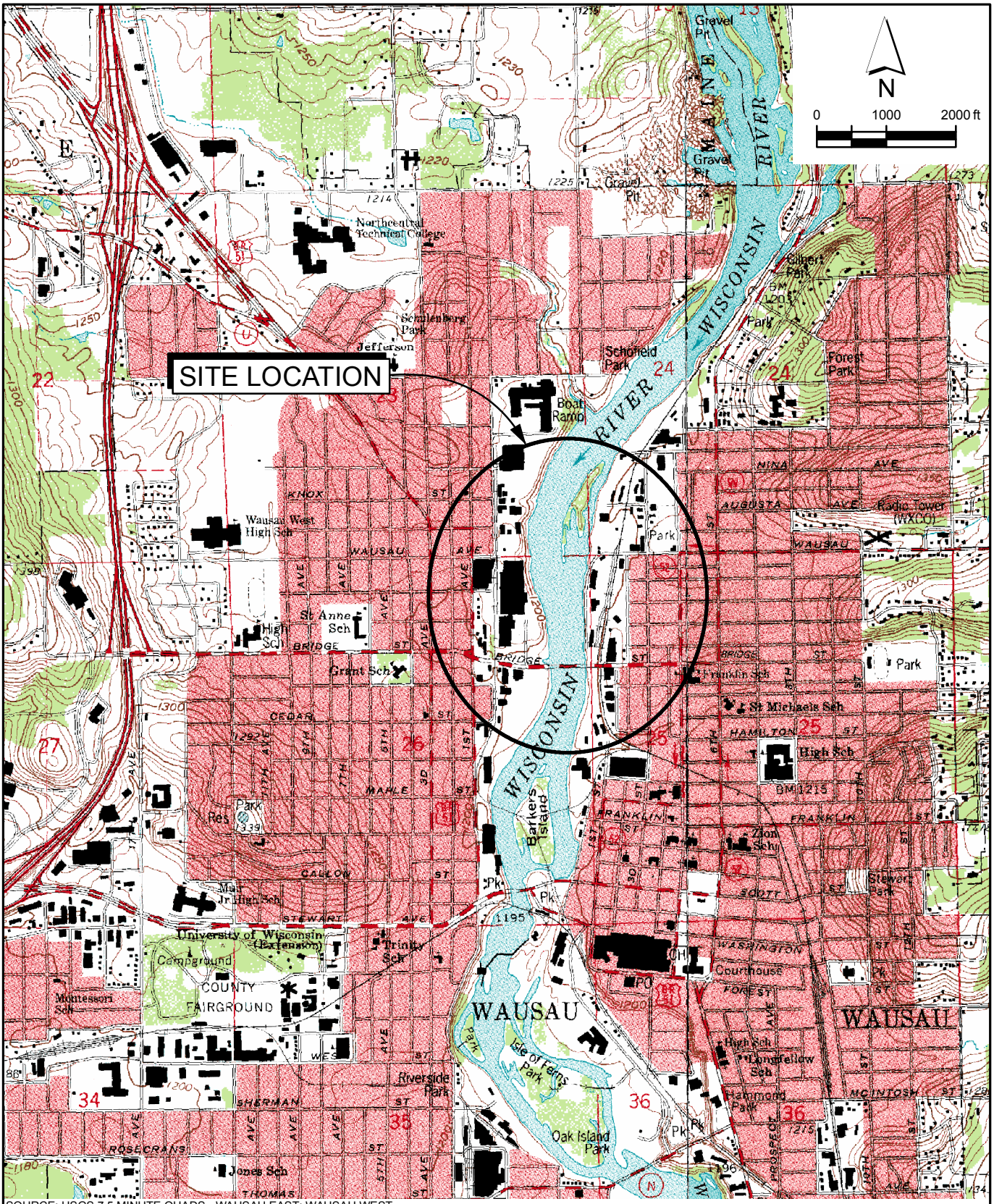
The removal of these 16 wells from the monitoring plan does not reduce the number of wells that will be monitored for VOC analysis and it does not reduce the locations for groundwater elevation monitoring.

Assuming that permanent shut down of EW1 will be approved, monitoring will no longer be conducted at that location.

A revised monitoring plan, based on the modifications presented herein, is summarized in Table 7.1.

7.2 Proposed Abandonment of Monitoring Wells

Since the monitoring wells listed above are no longer needed to monitor aquifer conditions, they should be properly sealed and abandoned. Upon approval of the proposed monitoring plan, a work plan for the abandonment of these wells will be submitted to EPA and WDNR for approval. EW1 and its associated treatment and discharge structures should also be sealed and properly dismantled.



SOURCE: USGS 7.5 MINUTE QUADS - WAUSAU EAST; WAUSAU WEST

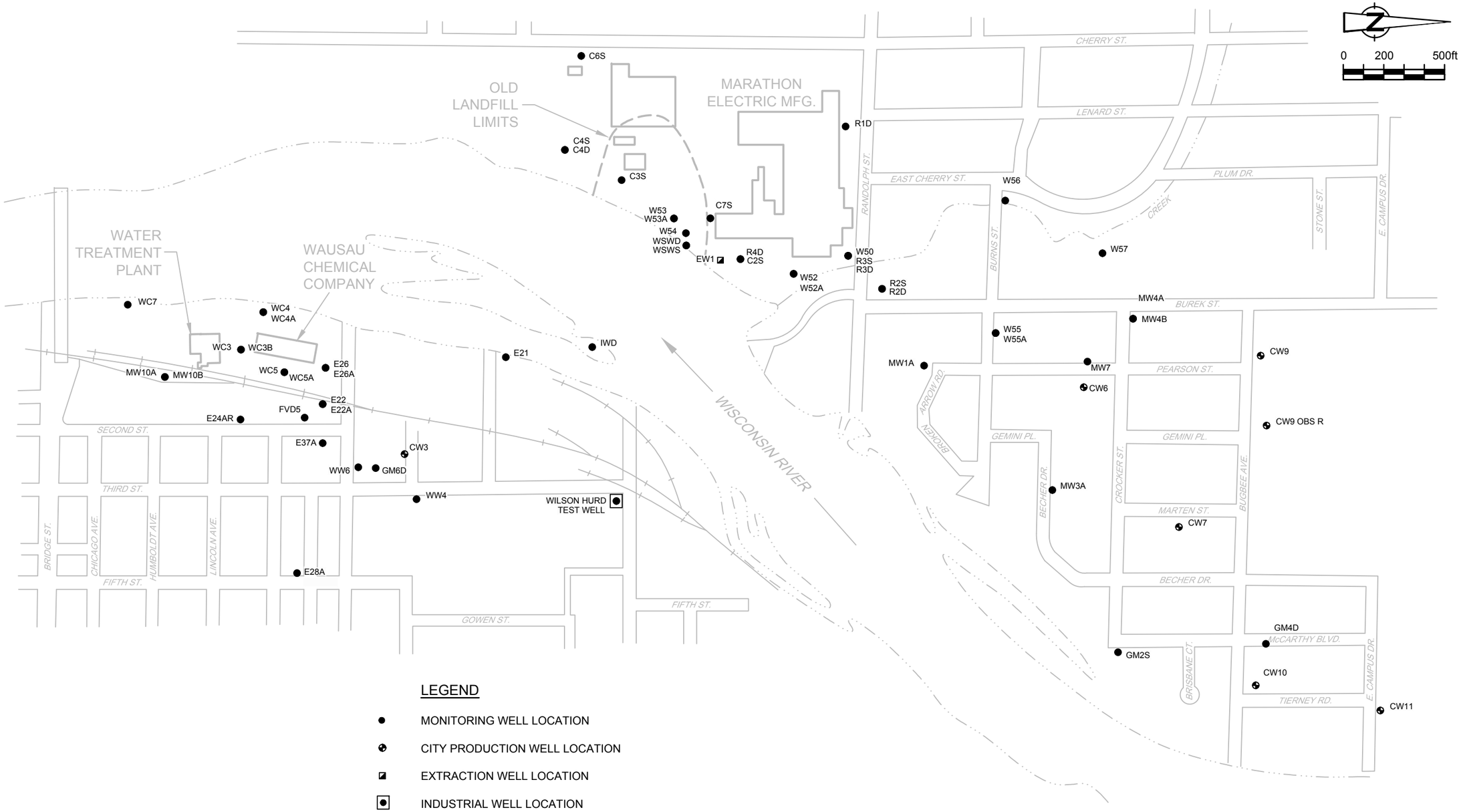
figure 1.1

SITE LOCATION

WAUSAU WATER SUPPLY NPL SITE

Wausau, Wisconsin

003978-00(034)GIS-SP001 FEB 18/2015



LEGEND

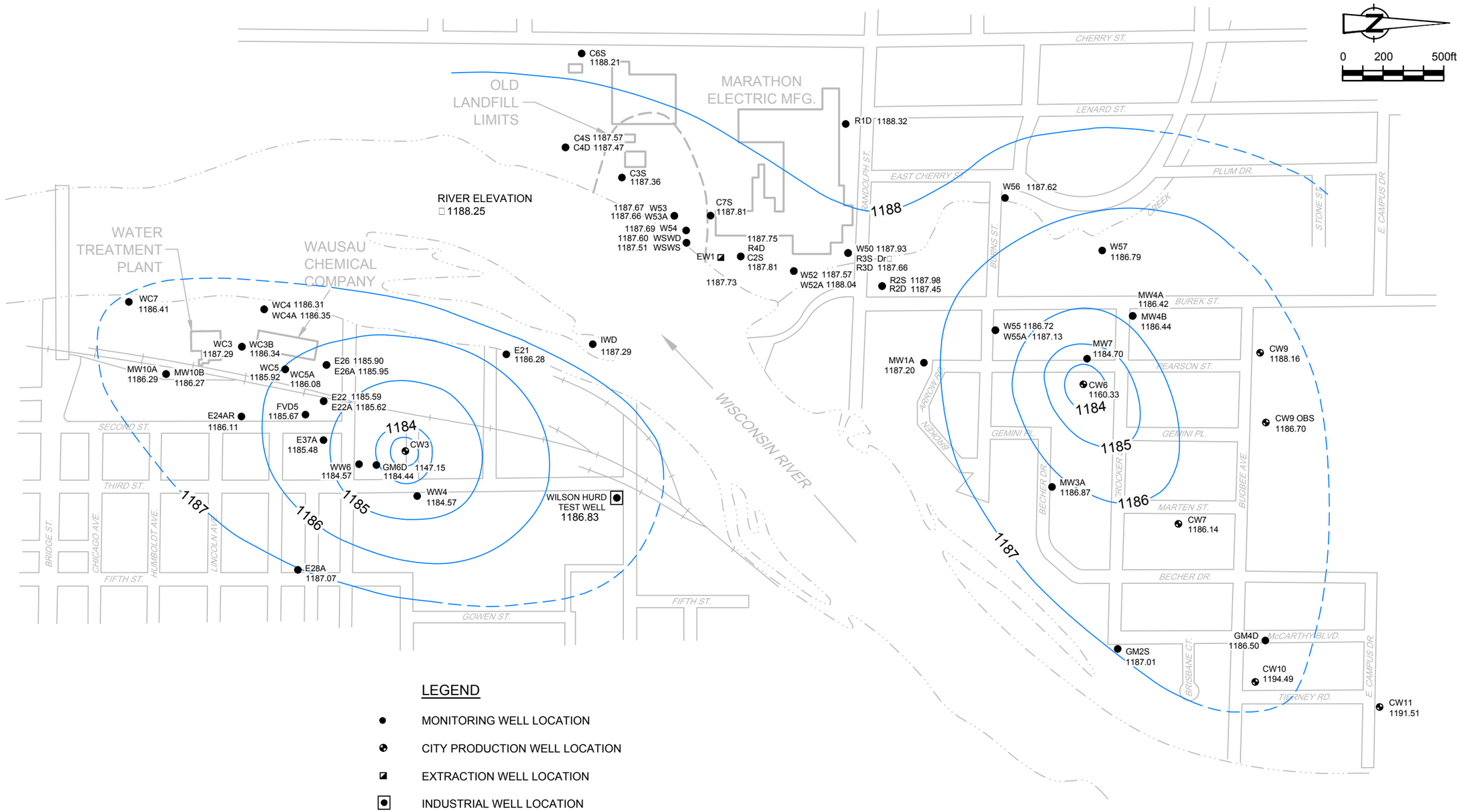
- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION

figure 1.2

SITE PLAN
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

SOURCE: RMT INC. FIGURE 1, 5/14/87.

03978-00(034)GN-WA001 FEB 2/2015



LEGEND

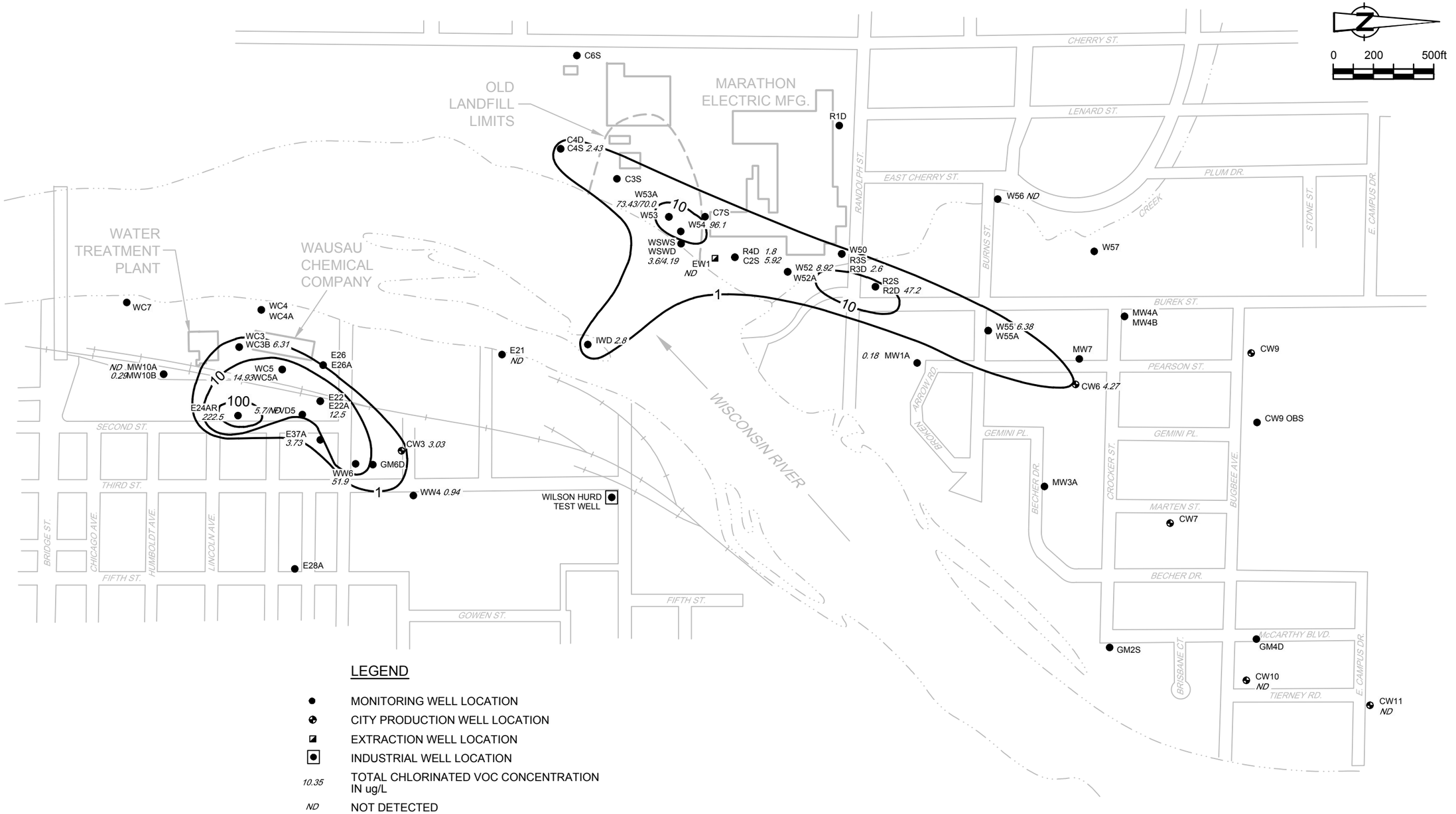
- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION

figure 2.1

GROUNDWATER ELEVATIONS
NOVEMBER 3, 4, 2014
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

SOURCE: RMT INC. FIGURE 1, 5/14/87.

03978-00(034)GN-WA002 FEB 2/2015



LEGEND

- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION
- *10.35* TOTAL CHLORINATED VOC CONCENTRATION IN ug/L
- *ND* NOT DETECTED
- 10 TOTAL CHLORINATED VOC CONTOUR

NOTE:
WHERE NO VALUE IS SHOWN, WELL WAS NOT SAMPLED

SOURCE: RMT INC. FIGURE 1, 5/14/87.

figure 4.1

TOTAL CHLORINATED VOCs IN GROUNDWATER (NOVEMBER 2014)
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

03978-00(034)GN-WA003 FEB 2/2015

LEGEND

- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION
- MONITORING WELL LOCATION
- AREA EXCEEDING GROUNDWATER CLEANUP PERFORMANCE STANDARDS
- SITE PARCEL BOUNDARY
- CITY OF WAUSAU WELLHEAD PROTECTION AREA - ZONE A

N

0 500 ft

CW11
CW9
CW9 OBS R
GM4D
CW10
CW7
GM2S
MW4B
MW4A
W57
MW7
CW6
MW3A
W56
W55A
W55
MW1A
R2D
R2S
R3S
R3D
W50
R1D
W52A
W52
C2S
R4D
EW1
C7S
W54
W53A
W53
WSWD
WSWS
C3S
C6S
C4S
C4D
IWD
E21
WW4
CW3
GM6D
WW6
E26
E26A
E22A
E22
E37A
FVD5
WC5
WC5A
E28A
WC4
WC4A
E24AR
WC3B
WC3
MW10A
MW10B
WC7A
WILSON HURD TEST WELL

MARATHON ELECTRIC MFG.

OLD LANDFILL LIMITS

WAUSAU CHEMICAL COMPANY

WATER TREATMENT PLANT

WISCONSIN RIVER

BUGBEE AV
TIERNEY RD
BUREK AV
PEARSON ST
GEMINI PL
MARTEN ST
BECHER DR
MCCARTHY BLVD
BRISBANE CT
CROCKER ST
BOS CREEK DR
CHERRY ST
LENARD ST
BURNS ST
BECHER DR
SPRING ST
BIRCH ST
ORCHARD ST
PARCHER ST
GILBERT ST
BROWN ST
WINTON ST
NINA AV
TURNER ST
AUGUSTA AV
DEVOE ST
GOWEN ST
N 5TH ST
CLAYTON ST
N 1ST AV
EAST CHERRY ST
RANDOLPH ST
ELDRED ST
STROWBRIDGE ST
KNOX ST
UNION AV
WAUSAU AV
NORTON ST
QUAW ST
BRIDGE ST
E UNION AV
JOZIK ST
E WAUSAU AV
MOBILE AV
CENTER ST
PARK AV
LINCOLN AV
N 3RD ST
N 6TH ST
N 7TH ST
N 8TH ST
HUMBOLDT AV
CHICAGO AV
N 2ND ST
E BRIDGE ST
N 1ST ST

figure 6.1

GROUNDWATER CLEANUP PERFORMANCE STANDARDS EXCEEDED
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

003978-00(034)GIS-SP002 FEB 18/2015

LEGEND

- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION
- MONITORING WELL LOCATION
- PRIVATE WELL SURVEY AREA
- SITE PARCEL BOUNDARY

N

0 500 ft

CW11 TIERNEY RD GM4D CW10 CW9 OBS R CW9 BUGBEE AV BUREK AV PEARSON ST GEMINI PL MARTEN ST BECHER DR CW7 MCCARTHY BLVD BRISBANE CT MORTENSON DR BOS CREEK DR CHERRY ST LENARD ST MW4B MW4A GM2S CROCKER ST W57 MW7 CW6 MW3A BECHER DR GEMINI PL W56 BURNS ST W55A W55 CLAYTON ST EAST CHERRY ST BROKEN ARROW RD MW1A N 1ST AV R2D R2S RANDOLPH ST R1D R3S R3D W50 W52A W52 WISCONSIN RIVER ELDRED ST MARATHON ELECTRIC MFG. C2S R4D EW1 C7S W54 W53A W53 WSWD WSWS C3S IWD STROWBRIDGE ST C6S C4S C4D KNOX ST E21 OLD LANDFILL LIMITS DEVOE ST UNION AV WILSON HURD TEST WELL WW4 CW3 GM6D WW6 WAUSAU AV WAUSAU CHEMICAL COMPANY E26 E26A E22A E22 E37A FVD5 E28A WC5 WC5A WC4 WC4A WC3B WC3 E24AR NORTON ST WATER TREATMENT PLANT MW10A MW10B WC7A QUAW ST BRIDGE ST E BRIDGE ST N 1ST ST N 2ND ST N 3RD ST N 5TH ST N 6TH ST N 7TH ST N 8TH ST CHICAGO AV HUMBOLDT AV LINCOLN AV PARK AV MOBILE AV E WAUSAU AV CENTER ST GOWEN ST N 5TH ST JOZIK ST E UNION AV AUGUSTA AV TURNER ST NINA AV WINTON ST BROWN ST GILBERT ST PARCHER ST ORCHARD ST SPRING ST BIRCH ST

figure 6.2

PRIVATE WELL SURVEY AREA
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

003978-00(034)GIS-SP003 FEB 18/2015

TABLE 2.1

GROUNDWATER ELEVATIONS - NOVEMBER 2014
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

	Reference Elevation		*Water Level (ft BTOC)*	*Water Table Elevation (ft AMSL)*
East Bank			***11/3/2014***	***11/3/2014***
CW3	1202.15	*	55.00	1147.15
E21	1197.51		11.23	1186.28
E22	1195.47		9.88	1185.59
E22A	1195.88		10.26	1185.62
E23A	1197.61	(1)	Abandoned	Abandoned
E24AR	1209.33	(2),(3)	23.22	1186.11
E24	1210.01	(2)	Abandoned	Abandoned
E24A	1211.07	(2)	Abandoned	Abandoned
E26	1199.02		13.12	1185.90
E26A	1199.13		13.18	1185.95
E28A	1211.60		24.53	1187.07
E37A	1197.84		12.36	1185.48
FVD5	1198.89		13.22	1185.67
GM6D	1198.57		14.13	1184.44
W. HURD	1200.23		13.40	1186.83
IWD	1192.10		4.81	1187.29
MW10A	1210.67		24.38	1186.29
MW10B	1210.37		24.10	1186.27
WC3	1198.26		10.97	1187.29
WC3B	1196.11	(3)	9.77	1186.34
WC4	1196.74		10.43	1186.31
WC4A	1196.57		10.22	1186.35
WC5	1196.62		10.70	1185.92
WC5A	1196.66		10.58	1186.08
WC7	1196.77		10.36	1186.41
WW4	1200.34	(3)	15.77	1184.57
WW6	1200.53		15.96	1184.57

TABLE 2.1

GROUNDWATER ELEVATIONS - NOVEMBER 2014
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

	Reference Elevation		*Water Level (ft BTOC) 11/4/2014*	*Water Table Elevation (ft AMSL) 11/4/2014*
West Bank				
EW1	1218.04	(4)	30.31	1187.73
CW6	1220.33	*	60.00	1160.33
CW7	1224.14		38.00	1186.14
CW9	1226.16		38.00	1188.16
CW9 OBS R	1224.51	(4)	37.81	1186.70
CW10	1218.49		24.00	1194.49
CW11	1216.51		25.00	1191.51
C2S	1219.05		31.24	1187.81
C3S	1220.58		33.22	1187.36
C4S	1216.70		29.13	1187.57
C4D	1216.16		28.69	1187.47
C6S	1221.58		33.37	1188.21
C7S	1220.87		33.06	1187.81
GM2S	1211.78		24.77	1187.01
GM4D	1216.35		29.85	1186.50
MW1A	1215.69		28.49	1187.20
MW3A	1220.87		34.00	1186.87
MW4A	1215.48		29.06	1186.42
MW4B	1215.10		28.66	1186.44
MW7	1218.53		33.83	1184.70
R1D	1222.24		33.92	1188.32
R2S	1209.70		21.72	1187.98
R2D	1209.42		21.97	1187.45
R3S	1215.17		Dry	Dry
R3D	1215.42		27.76	1187.66
R4D	1218.90		31.15	1187.75
W50	1215.54		27.61	1187.93
W52	1219.16		31.59	1187.57
W52A	1218.95		30.91	1188.04
W53	1216.67		29.00	1187.67
W53A	1216.90		29.24	1187.66
W54	1216.19		28.50	1187.69
W55	1217.04		30.32	1186.72

TABLE 2.1

GROUNDWATER ELEVATIONS - NOVEMBER 2014
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

	Reference Elevation		*Water Level (ft BTOC)*	*Water Table Elevation (ft AMSL)*
West Bank cont'd.				
W55A	1217.31		30.18	1187.13
W56	1200.01		12.39	1187.62
W57	1201.76	(3)	14.97	1186.79
WSWS	1193.04		5.53	1187.51
WSWD	1193.02		5.42	1187.60

Notes:

Elevations relative to National Geodetic Vertical Datum
ft BTOC - Feet below top of casing.
ft AMSL - Feet above mean sea level.
***** - Well was pumping.
NA - Not Applicable.
(1) Monitoring well E23A was abandoned in September 2014.
(2) Wells E24 and E24A were abandoned in 2012, replaced by the installation of E24AR in 2012.
(3) Reference elevation resurveyed in 2012.
(4) Reference elevation resurveyed in August 2014.

TABLE 2.2

SITE SPECIFIC VOC LIST
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Acetone
Benzene
Carbon tetrachloride
Chloroform
1,1-Dichloroethene
cis-1,2-Dichloroethene
Ethylbenzene
Methylene chloride
Tetrachloroethene
Toluene
1,1,2-Trichloroethane
Trichloroethene
Vinyl chloride
Xylenes

TABLE 2.3

GROUNDWATER SAMPLING SUMMARY - NOVEMBER 2014
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Well Designation	*Date*	*pH*	*Conductivity (uS/cm)*	*Temperature (°C)*	*Water Clarity*	*Gallons Removed*	*Sample ID Number*	*QA/QC*
East Bank								
CW3	11/3/2014	7.25	351	11.3	Clear	Grab	W-141103-MLR-01	
E21	11/3/2014	7.21	198	10.6	Clear	60.0	W-141103-MLR-13	MS/MSD
E22A	11/3/2014	NM	NM	NM	Clear	6.0	W-141103-MLR-20	
E24AR	11/3/2014	6.58	634	10.6	Clear	8.0	W-141103-MLR-22	
E37A	11/3/2014	6.85	314	11.7	Clear	6.5	W-141103-MLR-21	
FVD 5	11/3/2014	NM	NM	NM	Clear	4.5	W-141103-MLR-11	
							W-141103-MLR-12	Duplicate
IWD	11/4/2014	7.23	159	10.4	Clear	4.5	W-141104-MLR-26	
MW-10B	11/3/2014	6.86	200	10.7	Clear	9.0	W-141103-MLR-17	
							W-141103-MLR-16	Equipment Blank
MW-10A	11/3/2014	7.17	186	11.0	Clear	30.0	W-141103-MLR-18	
WC3B	11/3/2014	7.00	564	13.8	Clear	2.0	W-141103-MLR-15	
WC5A	11/3/2014	6.89	302	12.8	Clear	5.0	W-141103-MLR-02	
WW4	11/3/2014	6.47	541	10.3	Clear	12.0	W-141103-MLR-19	
WW6	11/3/2014	6.99	333	10.7	Clear	12.0	W-141103-MLR-14	

TABLE 2.3

GROUNDWATER SAMPLING SUMMARY - NOVEMBER 2014
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Well Designation	*Date*	*pH*	*Conductivity (uS/cm)*	*Temperature (°C)*	*Water Clarity*	*Gallons Removed*	*Sample ID Number*	*QA/QC*
West Bank								
C2S	11/3/2014	5.97	3880	12.1	Clear	6.0	W-141103-MLR-07	
							W-141103-MLR-08	Field Blank
C4S	11/4/2014	6.74	1344	11.0	Clear	3.0	W-141104-MLR-30	
CW6	11/4/2014	6.25	280	11.1	Clear	Grab	W-141104-MLR-23	
EW1	11/4/2014	8.73	301	11.8	Clear	Grab	W-141104-MLR-31	
MW-1A	11/4/2014	10.50	169	10.0	Clear	4.5	W-141104-MLR-25	
R2D	11/4/2014	6.78	114	10.3	Clear	55.0	W-141104-MLR-24	MS/MSD
R3D	11/4/2014	6.57	361	9.9	Clear	54.0	W-141104-MLR-33	
							W-141104-MLR-32	Equipment Blank
R4D	11/3/2014	6.93	874	11.5	Clear	6.0	W-141103-MLR-06	
W52	11/3/2014	8.10	104	12.9	Clear	6.0	W-141103-MLR-09	
W53A	11/3/2014	7.21	1545	11.9	Clear	6.0	W-141103-MLR-03	
							W-141103-MLR-04	Duplicate
W54	11/3/2014	6.70	524	12.0	Clear	6.0	W-141103-MLR-05	
W55	11/3/2014	7.50	176	10.2	Clear	6.0	W-141103-MLR-10	
W56	11/4/2014	7.10	745	10.3	Clear	27.0	W-141104-MLR-29	
WSWD	11/4/2014	7.31	193	10.6	Clear	4.0	W-141104-MLR-27	
							W-141104-MLR-28	Duplicate

Notes:

NM - Not Measured. Meter was not working.

TABLE 3.1

MONITORING WELL INSPECTION - 2014
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Well Name	*Total Depth from TOC/Stickup (ft.)* (1)	*Well ID/Tag Visible?*	*Casing & Grout Condition*	*Well Cap Condition (inner/outer)*	*Lock Condition*	*Concrete Seal Condition*	*Ground Condition (subsidence?)*	*Flush Mount*	*Notes*
East Bank									
CW3	NA	NA	NA	NA/Good	NA	NA	NA		
E21	132.9/1.2	Yes	Good	None/OK	OK	Good	Okay		No room for J-Plug
E22	90.40/-0.5	Yes - Paint label	Good	Poor/OK	OK	Good	Okay	FM	Bolt threads are stripped.
E22A	22.10/-0.4	Yes - Paint label	Good	OK/OK	OK	Good	Okay	FM	
E23A	NA	NA	NA	NA	NA	NA	NA		Well abandoned in September 2014.
E24AR	34.30/-0.3	No	Good	Good/ Good	Good	Good	Okay	FM	
E26	94.80/2.60	Yes	Good	see note/OK	OK	OK	Okay		
E26A	25.95/2.40	Yes	Good	see note/OK	Poor	OK	Okay		Lock is sticky
E28A	33.7/-0.3	No	Good/OK	Poor/OK	Good	Good	Okay	FM	Bolt threads are stripped.
E37A	25.35/-0.5	Yes	OK	OK/OK	Good	OK	Okay	FM	
FVD5	22.55/1.4	Yes	OK	None/OK	OK	OK	Okay		
GM6D	109.4/-0.3	No	Good	OK/OK	Good	Good	Okay	FM	
W. HURD	103.9/1.3	Yes	Good	NA/Good	Good	Good	Okay		
IWD	129/2.2	Yes	OK	BP-OK/Poor	OK	Good	Okay		No inner cap - Bladder Pump. Outer cap does not fit well.
MW10A	81.0/3.3	Yes	Good	None/ Good	Good	Good	Okay		Outer caps are difficult to remove.
MW10B	40.7/2.5	Yes	Good	None/Good	Good	Good	Okay		Outer caps are difficult to remove.
WC3	164.0/2.0	Yes	Good	Good/Good	Good	Good	Okay		
WC3B	22.25/-0.35	Yes	Good	Good/Good	Good	Good	Okay		
WC4	54.8/1.4	Yes	Good	None/OK	Good	Good	Okay		
WC4A	20.7/1.4	Yes	Good	Good/OK	Good	Good	Okay		
WC5	55.7/1.5	Yes	Good	None/OK	Good	Good	Okay		No inner cap.
WC5A	20.8/1.3	Yes	Good	None/OK	OK	Good	Okay		No inner cap.
WC7	54.45/1.3	Yes	Good	None/Good	Good	Good	Okay		Well ID tag is painted over.
WW4	34.85/-0.3	No	OK	OK/Poor	Good	OK	Okay	FM	Needs new bolt; no bolts present.
WW6	40.1/1.8	Faded	OK	None/OK	OK	Good	Okay		No inner cap.

TABLE 3.1

MONITORING WELL INSPECTION - 2014
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Well Name	*Total Depth from TOC/Stickup (ft.)* (1)	*Well ID/Tag Visible?*	*Casing & Grout Condition*	*Well Cap Condition (inner/outer)*	*Lock Condition*	*Concrete Seal Condition*	*Ground Condition (subsidence?)*	*Flush Mount*	*Notes*
West Bank									
EW1	143/NM	NA	OK	None	None	Good	Concrete		Well is inside locked pump house.
CW6	NA	NA	NA	NA/Good	NA	NA	NA		
CW7	NA	NA	NA	NA/Good	NA	NA	NA		
CW9	NA	NA	NA	NA/Good	NA	NA	NA		
CW9 OBS R	102.75/2.3	Yes	OK	OK	None	OK	OK		
CW10	NA	NA	NA	NA/Good	NA	NA	NA		
CW11	NA	NA	NA	NA/Good	NA	NA	NA		
C2S	35.95/3.0	Yes	OK	BP - OK/OK	Good	Good	Okay		
C3S	40.7/2.7	Yes	OK	OK/OK	Good	Good	Okay		
C4S	34.9/3.0	Yes	OK	OK/OK	Good	Good	Okay		
C4D	103/2.9	Yes	OK	OK/OK	Good	Good	Okay		
C6S	41.3/2.4	Yes	OK	None/OK	Good	Good	Okay		
C7S	40.2/2.4	Yes	OK	OK/OK	OK	Good	Okay		
GM2S	34.4/-0.5	Yes - Paint label	OK	Good/Poor	Good	Good	Okay	FM	Bolts don't thread
GM4D	53.8/1.5	Yes	OK	None/OK	Good	Good	Okay		
MW1A	125.8/1.3	Yes	OK	BP - OK/OK	Good	Good	Okay		
MW3A	74.5/-0.2	Yes - Paint label	OK	Good/OK	Good	Good	Okay	FM	
MW4A	100.3/-0.3	Yes - Paint label	OK	Good/Poor	Good	Good	Okay	FM	No room for lock on J-Plug. Bolts don't thread.
MW4B	58.8/-0.3	Yes - Paint label	OK	OK/OK	OK	Good	Okay	FM	
MW7	44.2/-0.3	Yes - Paint label	OK	Good/OK	Good	Good	Okay	FM	
R1D	125.0/1.9	Yes	OK	None/OK	OK	Good	Okay		
R2S	30.75/1.4	Yes	OK	Poor/OK	Good	Good	Okay		Lid hinge is stiff.
R2D	124.8/1.9	Yes	OK	BP - OK/OK	Good	Good	Okay		
R3S	26.7/2.5	Yes	OK	Poor/OK	Good	Good	Okay		Lid hinge is stiff.
R3D	139.3/2.9	Yes	OK	OK/OK	Good	Good	Okay		
R4D	124.9/2.9	Yes	OK	BP - OK/OK	Good	Good	Okay		
W50	84.9/3.1	Yes	OK	None/OK	Good	Good	Okay		
W52	116.3/2.9	Yes	OK	BP - OK/OK	OK	Good	Okay		
W52A	38.2/2.9	Yes	OK	OK/OK	OK	Good	Okay		
W53	124.6/-0.75	Yes - Paint label	OK	BP - Poor/OK	None	Good	Okay	FM	Cracked outer collar.
W53A	36.2/-0.4	Yes - Paint label	OK	BP-Good/OK	Good	Good	Okay	FM	

TABLE 3.1

MONITORING WELL INSPECTION - 2014
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Well Name	*Total Depth from TOC/Stickup (ft.)* [(1)]	*Well ID/Tag Visible?*	*Casing & Grout Condition*	*Well Cap Condition (inner/outer)*	*Lock Condition*	*Concrete Seal Condition*	*Ground Condition (subsidence?)*	*Flush Mount*	*Notes*
West Bank (Continued)									
W54	59.65/-0.25	Yes - Paint label	OK	BP - Good/Poor	Good	Good	Okay	FM	Bolts don't thread
W55	105.7/-0.9	No	OK	OK/OK	Good	Good	Okay	FM	
W55A	42.55/-0.75	No	OK	OK/OK	Good	Good	Okay	FM	
W56	67.0/1.4	Yes - Paint label	OK	Good/Good	Good	Good	Okay	FM	
W57	74.8/-0.2	No	OK	Good/Poor	Good	Good	Okay	FM	Only 1 bolt threads.
WSWS	15.7/4.2	Yes	OK	Good/Good	Good	Good	Okay		
WSWD	141/3.2	Yes	OK	BP-Good/OK	Good	Good	Okay		

Notes:

(1) - Not measured in October 2014. Last measured in October 2013.

BP - Well contains a dedicated bladder pump with a special cap for easy hookup

TABLE 3.2

CITY WATER SUPPLY WELL PUMPING AVERAGES
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Hours indicates total hours pumped per month - Gallons indicates millions of gallons pumped per month		*Well #3*	*Well #6*	*Well #7*	*Well #9*	*Well #10*	*Well #11*
	Hours	356.6	383.1	235.1	82.7	99.8	96.9
January	Gallons	33.051	30.469	24.37	4.479	19.925	16.943
	gpm	1545	1326	1728	903	3327	2914
	Hours	308.7	359.5	275.4	185.4	169.5	208.8
February	Gallons	27.344	29.992	28.45	10.097	31.838	36.443
	gpm	1476	1390	1722	908	3131	2909
	Hours	387.8	353.9	200	124	269.6	399
March	Gallons	33.915	32.04	19.445	6.713	50.23	69.454
	gpm	1458	1509	1620	902	3105	2901
	Hours	240.3	476.3	190.3	76.2	221.3	281.9
April	Gallons	20.477	38.436	18.002	3.851	46.201	49.107
	gpm	1420	1345	1577	842	3480	2903
	Hours	394.5	350.8	304.7	112.8	133.2	141.8
May	Gallons	29.449	28.034	31.826	6.061	26.162	24.63
	gpm	1244	1332	1741	896	3274	2895
	Hours	333.1	380.8	267.4	111.9	157.1	149.12
June	Gallons	30.637	31.065	27.356	6.256	30.027	26.889
	gpm	1533	1360	1705	932	3186	3005
	Hours	313.9	423.8	240	120.5	333.7	6.3
July	Gallons	29.927	34.03	26.158	6.541	77.64	1.058
	gpm	1589	1338	1817	905	3878	2799
	Hours	406.3	310	279.3	183.6	191.8	97.4
August	Gallons	36.399	24.2	30.38	9.929	36.525	16.979
	gpm	1493	1301	1813	901	3174	2905
	Hours	287.3	394.3	204.7	39.9	84.4	152.7
September	Gallons	30.434	30.78	22.18	2.152	15.999	26.622
	gpm	1766	1301	1806	899	3159	2906
	Hours	338.8	400.1	220.8	49.3	147	129.7
October	Gallons	28.574	30.234	22.713	2.693	23.202	22.546
	gpm	1406	1259	1714	910	2631	2897
	Hours	393.5	320.5	242.9	36.6	85	98.9
November	Gallons	32.621	24.922	24.933	2.005	16.542	17.232
	gpm	1382	1296	1711	913	3244	2904
	Hours	287	452.4	197.6	37.1	144.7	117.3
December	Gallons	23.737	35.43	20.237	2.007	28.668	19.813
	gpm	1378	1305	1707	902	3302	2815
Average hours per week:		77.8	88.6	55.0	22.3	39.2	36.2
Average gpm:		1474	1339	1722	901	3241	2896

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:			***CW3***	***CW3***	***CW3***	***CW3***	***CW3***	***CW3***	***E21***	***E21***	***E21***
Sample Date:			***11/11/2013***	***3/24/2014***	***5/19/2014***	***5/19/2014***	***8/11/2014***	***11/3/2014***	***11/11/2013***	***3/24/2014***	***5/19/2014***
Sample Type:						***Duplicate***					
		MCL									
1,1,2-Trichloroethane	ug/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acetone	ug/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	ug/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	80*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	70	**0.50 J**	**0.74 J**	**0.90 J**	**0.82 J**	**0.59 J**	**0.58 J**	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	5	**1.40**	**1.40**	**1.4**	**1.4**	**1.6**	**1.6**	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	5	**0.72 J**	**0.78 J**	**0.78 J**	**0.79 J**	**0.75 J**	**0.85 J**	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	10000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L		2.62	2.92	3.08	3.01	2.94	3.03	0.0	0.0	0.0

TABLE 4.1

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***E21***	***E21***	***E22A***	***E22A***	***E24AR***	***E24AR***	***E37A***	***E37A***	***WC3B***	***WC3B***
Sample Date:		***8/11/2014***	***11/3/2014***	***11/12/2013***	***11/3/2014***	***11/12/2013***	***11/3/2014***	***11/12/2013***	***11/3/2014***	***11/11/2013***	***11/3/2014***
Sample Type:											
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acetone	ug/L	10 U	10 U	29 U	10 U	10 U	40 U	10 U	10 U	10 U	**4.3 J**
Benzene	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	**97**	**3.5**	**3.5**	**120**	**1.9**	**1.1**	1.0 U	**0.35 J**
Ethylbenzene	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	**17**	**8.1**	**15**	**86**	**1.4**	**2.0**	1.0 U	**5.5**
Toluene	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	**6.9**	**0.90 J**	**2.3**	**11**	**0.78 J**	**0.63 J**	1.0 U	**0.46 J**
Vinyl chloride	ug/L	1.0 U	1.0 U	**1.0 J**	1.0 U	**1.2**	**5.5**	**0.59 J**	1.0 U	**0.26 J**	1.0 U
Xylenes (total)	ug/L	1.0 U	1.0 U	2.9 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L	0.0	0.0	121.9	12.5	22.0	222.5	4.67	3.73	0.26	6.31

TABLE 4.1

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***WC5A***	***WC5A***	***WW4***	***WW4***	***FVD5***	***FVD5***	***FVD5***	***WW6***	***WW6***
Sample Date:		***11/11/2013***	***11/3/2014***	***11/12/2013***	***11/3/2014***	***11/12/2013***	***11/3/2014***	***11/3/2014***	***11/12/2013***	***11/3/2014***
Sample Type:								***Duplicate***		
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U	33 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U	33 U	1.0 U	1.0 U
Acetone	ug/L	10 U	10 U	10 U	10 U	50 U	250 U	330 U	10 U	10 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**19**	**23 J**	**20 J**	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U	33 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	**0.20 J**	**0.94 J**	5.0 U	25 U	33 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	**1.7**	1.0 U	1.0 U	5.0 U	25 U	33 U	**21**	**28**
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**210**	**370**	**360**	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U	33 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	**7.3**	**12**	1.0 U	1.0 U	5.0 U	25 U	33 U	**3.8**	**6.0**
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**9.5**	**23 J**	**21 J**	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	**0.52 J**	1.0 U	1.0 U	5.0 U	**5.7 J**	33 U	**2.0**	**5.9**
Vinyl chloride	ug/L	1.0 U	**0.71 J**	1.0 U	1.0 U	5.0 U	25 U	33 U	**19**	**12**
Xylenes (total)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**440**	**980**	**920**	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L	7.3	14.93	0.20	0.94	0.0	5.7	0.0	45.8	51.9

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***MW10A***	***MW10A***	***MW10B***	***MW10B***	***IWD***	***IWD***	***IWD***	***IWD***	***CW6***	***CW6***
Sample Date:		***11/11/2013***	***11/3/2014***	***11/11/2013***	***11/3/2014***	***11/13/2013***	***5/20/2014***	***8/12/2014***	***11/4/2014***	***11/12/2013***	***3/25/2014***
Sample Type:											
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acetone	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**1.1**	**1.8**	**0.87 J**	**0.30 J**	1.0 U	1.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	**0.29 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**2.2**	**3.3**	**2.7**	**2.5**	**3.9**	**3.7**
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L	0.0	0.0	0.0	0.29	3.3	5.1	3.57	2.8	3.9	3.7

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***CW6***	***CW6***	***CW6***	***CW10***	***CW10***	***CW10***	***CW10***	***CW11***	***CW11***	***CW11***
Sample Date:		***5/20/2014***	***8/12/2014***	***11/4/2014***	***11/12/2013***	***3/25/2014***	***5/20/2014***	***8/12/2014***	***11/12/2013***	***3/25/2014***	***8/12/2014***
Sample Type:											
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acetone	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.63 J**
cis-1,2-Dichloroethene	ug/L	1.0 U	**0.19 J**	**0.27 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	**3.4**	**4.0**	**4.0**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L	3.4	4.19	4.27	0.0	0.0	0.0	0.0	0.0	0.0	0.63

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***EW1***	***EW1***	***EW1***	***EW1***	***MW1A***	***MW1A***	***MW1A***	***C2S***	***C2S***	***C2S***
Sample Date:		***11/12/2013***	***5/20/2014***	***8/12/2014***	***11/4/2014***	***11/12/2013***	***5/20/2014***	***11/4/2014***	***11/13/2013***	***5/20/2014***	***11/3/2014***
Sample Type:											
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acetone	ug/L	10 U	2.4 J	1.0 U	10 U	10 U	10 U	12	10 U	10 U	10 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	**0.20 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.0**	**0.67 J**	**0.52 J**
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	**0.59 J**	1.0 U	1.0 U	1.0 U	1.0 U	**0.42 J**	**0.18 J**	**7.9**	**5.5**	**5.4**
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.25 J**	1.0 U	1.0 U	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L	0.79	0.0	0.0	0.0	0.0	0.42	0.18	8.9	6.17	5.92

TABLE 4.1

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***C4S***	***C4S***	***C4S***	***R2D***	***R2D***	***R2D***	***R2D***	***R2D***	***R2D***	***R3D***
Sample Date:		***11/13/2013***	***5/20/2014***	***11/4/2014***	***11/12/2013***	***3/24/2014***	***3/24/2014***	***5/19/2014***	***8/11/2014***	***11/4/2014***	***11/13/2013***
Sample Type:							***Duplicate***				
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Acetone	ug/L	10 U	**1.3 J**	10 U	10 U	10 U	10 U	**1.4 J**	10 U	17 U	10 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	**0.23 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	**1.0**	**0.61 J**	**0.62 J**	**1.1**	**1.2**	**1.2 J**	1.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Trichloroethene	ug/L	**1.1**	**1.4**	**2.2**	**19**	**18**	**17**	**18**	**32**	**46**	**4.8**
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Xylenes (total)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U
Total Chlorinated VOCs	ug/L	1.1	1.4	2.43	20.0	18.61	17.62	19.1	33.2	47.2	4.8

TABLE 4.1

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***R3D***	***R3D***	***R3D***	***R3D***	***R4D***	***R4D***	***R4D***	***W52***	***W52***	***W52***
Sample Date:		***3/24/2014***	***5/20/2014***	***8/12/2014***	***11/4/2014***	***11/12/2013***	***5/20/2014***	***11/3/2014***	***11/13/2013***	***5/20/2014***	***11/3/2014***
Sample Type:											
1,1,2-Trichloroethane	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acetone	ug/L	33 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	**5.7**	1.0 U	1.0 U	1.0 U	**0.58 J**	**0.49 J**	1.0 U	**0.32 J**	1.0 U	**0.42 J**
Ethylbenzene	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	3.3 U	1.0 U	**0.14 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	**68**	**4.7**	**2.9**	**2.6**	**16**	**7.4**	**1.8**	**2.6**	**3.4**	**8.5**
Vinyl chloride	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	3.3 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L	73.7	4.7	2.9	2.6	16.58	7.89	1.8	2.92	3.40	8.92

TABLE 4.1

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***W53A***	***W53A***	***W53A***	***W53A***	***W53A***	***W54***	***W54***	***W54***	***W55***	***W55***
Sample Date:		***11/13/2013***	***5/20/2014***	***8/12/2014***	***11/3/2014***	***11/3/2014***	***11/13/2013***	***5/20/2014***	***11/3/2014***	***11/12/2013***	***5/20/2014***
Sample Type:						***Duplicate***					
1,1,2-Trichloroethane	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	**0.22 J**	1.4 U	3.3 U	1.0 U	1.0 U
Acetone	ug/L	10 U	33 U	1.3 U	20 U	20 U	10 U	14 U	33 U	10 U	10 U
Benzene	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	3.3 U	**0.31 J**	**0.43 J**	2.0 U	**0.74 J**	**1.5**	**1.1 J**	**0.47 J**	**0.39 J**
Ethylbenzene	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
Trichloroethene	ug/L	**54**	**88**	**77**	**73**	**70**	**23**	**39**	**95**	**4.7**	**4.6**
Vinyl chloride	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
Xylenes (total)	ug/L	1.0 U	3.3 U	1.3 U	2.0 U	2.0 U	1.0 U	1.4 U	3.3 U	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L	54	88	77.31	73.43	70.0	23.96	40.5	96.1	5.17	4.99

TABLE 4.1

VOC ANALYTICAL RESULTS
ANNUAL GROUNDWATER MONITORING EVENT - NOVEMBER 2014
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN

Sample Location:		***W55***	***W55***	***W55***	***W56***	***W56***	***W56***	***WSWD***	***WSWD***	***WSWD***	***WSWD***
Sample Date:		***8/12/2014***	***8/12/2014***	***11/3/2014***	***11/12/2013***	***5/19/2014***	***11/4/2014***	***11/13/2013***	***5/20/2014***	***11/4/2014***	***11/4/2014***
Sample Type:			***Duplicate***								***Duplicate***
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acetone	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	**0.38 J**	**0.38 J**	**0.48 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.40 J**	**0.39 J**
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	**5.0**	**5.0**	**5.9**	1.0 U	1.0 U	1.0 U	**0.45 J**	**0.48 J**	**3.2**	**3.8**
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Chlorinated VOCs	ug/L	5.38	5.38	6.38	0.0	0.0	0.0	0.45	0.48	3.60	4.19

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
FD - Field Duplicate
* - Total trihalomethanes
MCL -EPA Maximum Contaminant Level for Drinking Water

TABLE 5.1

EW1 SHUTDOWN PILOT STUDY MONITORING PLAN
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

MONITORING PLAN

Monitoring Event	*VOC SAMPLE LOCATIONS*			*Laboratory Analysis*	*Groundwater Elevations*
	East Bank	*West Bank*	*West Wellfield*		
November 4th Quarter 2013	CW3, E24AR, MW10A, MW10B, WW4, FVD5, E22A, E23A, E37A, WC3B, WW6, WC5A, E21, IWD	EW1, CW6, W53A, W54, R4D, C2S, R3D, C4S, W52, W56, R2D, WSWD, W55, MW1A	West Well Field wells other than CW6 (CW9, CW10, CW11 if operating on day of monitoring)	VOC (8260)	All Monitoring Wells, City Wells, and EW1 (63 wells total)
February 1st Quarter 2014	CW3, E21, IWD	CW6, R2D, R3D, W53A, W55	West Well Field wells other than CW6 (CW9, CW10, CW11 if operating on day of monitoring)	VOC (8260)	All Monitoring Wells, City Wells, and EW1 (63 wells total)
May 2nd Quarter 2014	CW3, E21, IWD	EW1, CW6, W53A, W54, R4D, C2S, R3D, C4S, W52, W56, R2D, WSWD, W55, MW1A	West Well Field wells other than CW6 (CW9, CW10, CW11 if operating on day of monitoring)	VOC (8260)	All Monitoring Wells, City Wells, and EW1 (63 wells total)
August 3rd Quarter 2014	CW3, E21, IWD	CW6, R2D, R3D, W53A, W55, EW1	West Well Field wells other than CW6 (CW9, CW10, CW11 if operating on day of monitoring)	VOC (8260)	All Monitoring Wells, City Wells, and EW1 (63 wells total)
November 4th Quarter 2014	CW3, E24AR, MW10A, MW10B, WW4, FVD5, E22A, E37A, WC3B, WW6, WC5A, E21, IWD	EW1, CW6, W53A, W54, R4D, C2S, R3D, C4S, W52, W56, R2D, WSWD, W55, MW1A	West Well Field wells other than CW6 (CW9, CW10, CW11 if operating on day of monitoring)	VOC (8260)	All Monitoring Wells, City Wells, and EW1 (63 wells total)

Notes:

Additional data to be obtained includes:

1. Pumping rates of all City wells on a quarterly basis
2. City water supply quarterly VOC analytical results. These data will be provided by the City Water Treatment Plant.

TABLE 6.1

INSTITUTIONAL CONTROLS SUMMARY
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Media, Engineered Controls, & Areas that Do Not Support UU/UE Based on Current Conditions	***IC Objective***	***Title of Institutional Control Instrument Implemented***
Groundwater – Wellhead Protection Zone A	Prevent activities that increase risk of groundwater contamination	City of Wausau Municipal Code Chapter 23.54
Groundwater – all areas within Wausau City limits	Restricts private groundwater use through the permitting process for private water supply well installations and provides authority to require abandonment of existing private wells	City of Wausau Municipal Code Chapter 19.30
Groundwater - Impermeable surface maintenance (paved parking lot) at Wausau Chemical Corp.	Prohibit infiltration of precipitation in the former source area on the south end of the facility	Deed Restriction - Document # 1475599

TABLE 7.1

CURRENT AND PROPOSED GROUNDWATER MONITORING PLAN
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Current Monitoring Plan

Monitoring Event	*VOC Sample Locations*		*Laboratory Analysis*	*Groundwater Elevations*
	East Bank	*West Bank*		
Annual - 4th Quarter	CW3, E24A, E24B, MW10A, MW10B, WW4, FVD5, E22A, E37A, WC3B, WW6, WC5A, IWD	EW1, CW6, W53A, W54, R4D, C2S, R3D, C4S, W52, W56, R2D, WSWD, W55, MW1A	VOC (8260)	All Monitoring Wells, City Wells, and EW1 (63 wells total)

Proposed Monitoring Plan

Monitoring Event	*VOC Sample Locations*		*Laboratory Analysis*	*Groundwater Elevations*
	East Bank	*West Bank*		
Annual - 4th Quarter	CW3, E24AR, MW10B, WW4, FVD5, E22A, WC3B, WW6, WC5A, E21	EW1, CW6, W53A, W54, R4D, C2S, R3D, C4S, W52, W56, R2D, WSWD, W55, MW1A	VOC (8260)	E21, E22A, E24AR, E26A, E28A, E37A, FVD5, GM6D, W.HURD, MW10B, WC3B, WC4A, WC5A, WC7, WW4, WW6, C2S, C3S, C4S, C6S, C7S, GM2S, GM4D, MW1A, MW3A, MW4A, MW7, R1D, R2D, R3D, R4D, W52, W53A, W54, W55, W56, W57, WSWD, CW9-OBS City Wells CW3, CW6, CW9, CW10, CW11 (44 WELLS TOTAL)

Appendix A

November 2014 Laboratory Report and Data Quality Validation Memoranda

CONESTOGA-ROVERS & ASSOCIATES

1801 Old Highway 8 NW, Suite #114
St. Paul, Minnesota 55112
Telephone: (651) 639-0913 Fax: (651) 639-0923
www.CRAworld.com

MEMORANDUM

TO: Chuck Ahrens, CRA

REF. NO.: 003978

FROM: Grant Anderson/sb/7

DATE: November 20, 2014

RE: Analytical Results and Reduced Validation
Annual Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
November 2014

1.0 Introduction

The following document details a reduced validation of analytical results for water samples collected in support of the annual groundwater monitoring at the Wausau Superfund Site during November 2014. Samples were submitted to TestAmerica laboratories, Inc., located in North Canton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) Quality Assurance Project Plan (QAPP), February 1994, June, 11, 1999, letter to USEPA
ii) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

Item ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding time.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The method blanks were reported to be non-detect, indicating that laboratory contamination was unlikely.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the criteria.

5.0 Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

7.0 Field QA/QC Samples

The field QA/QC consisted of one field blank sample, two rinsate blank samples, and three field duplicate sample set.

Field Blank Sample Analysis

To assess ambient conditions at the Site, and cleanliness of sample containers, a field blank was collected and submitted for analysis, as identified in Table 1. The field blank sample yielded a detectable concentration of xylenes. However, xylenes was not detected in the associated sample; therefore, no qualification of data was necessary based on compounds detected in the field blank.

Rinsate Blank Sample Analysis

To assess decontamination of sampling equipment, ambient conditions at the Site, and cleanliness of sample containers, two rinsate blanks were collected and submitted for analysis, as identified in Table 1. One of the rinsate blanks was non-detect. The other rinsate blank sample yielded a detectable concentration of chloroform. However, chloroform was not detected in the associated sample; therefore, no qualification of data was necessary based on compounds detected in the rinsate blank.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, a field duplicate sample set was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with duplicate samples must be less than 50. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value.

The field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8.0 Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

9.0 Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
ANNUAL SAMPLING EVENT
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN
NOVEMBER 2014

Sample Identification	*Location*	*Matrix*	*Collection Date (mm/dd/yyyy)*	*Collection Time (hr:min)*	*Analysis/Parameters*	*Comments*
W-141103-MLR-01	CW3		11/3/2014	12:57:00 PM	VOC (Site List)	
W-141103-MLR-02	WC5A		11/3/2014	1:25:00 PM	VOC (Site List)	
W-141103-MLR-03	W53A		11/3/2014	1:55:00 PM	VOC (Site List)	
W-141103-MLR-04	W53A		11/3/2014	1:55:00 PM	VOC (Site List)	Duplicate (-03)
W-141103-MLR-05	W54		11/3/2014	2:20:00 PM	VOC (Site List)	
W-141103-MLR-06	R4D		11/3/2014	2:45:00 PM	VOC (Site List)	
W-141103-MLR-07	C2S		11/3/2014	2:40:00 PM	VOC (Site List)	
W-141103-MLR-08	C2S		11/3/2014	3:05:00 PM	VOC (Site List)	Field Blank
W-141103-MLR-09	W52		11/3/2014	3:25:00 PM	VOC (Site List)	
W-141103-MLR-10	W55		11/3/2014	3:45:00 PM	VOC (Site List)	
W-141103-MLR-11	FVD5		11/3/2014	4:40:00 PM	VOC (Site List)	
W-141103-MLR-12	FVD5		11/3/2014	4:40:00 PM	VOC (Site List)	Duplicate (-11)
W-141103-MLR-13	E21		11/3/2014	2:57:00 PM	VOC (Site List)	MS/MSD
W-141103-MLR-14	WW6		11/3/2014	3:20:00 PM	VOC (Site List)	
W-141103-MLR-15	WC3B		11/3/2014	3:35:00 PM	VOC (Site List)	
W-141103-MLR-16	MW10B		11/3/2014	1:55:00 PM	VOC (Site List)	Rinsate Blank
W-141103-MLR-17	MW10B		11/3/2014	4:14:00 PM	VOC (Site List)	
W-141103-MLR-18	MW10A		11/3/2014	4:12:00 PM	VOC (Site List)	
W-141103-MLR-19	WW4		11/3/2014	4:40:00 PM	VOC (Site List)	
W-141103-MLR-20	E22A		11/3/2014	5:05:00 PM	VOC (Site List)	
W-141103-MLR-21	E37A		11/3/2014	5:12:00 PM	VOC (Site List)	
W-141103-MLR-22	E24AR		11/3/2014	5:13:00 PM	VOC (Site List)	
W-141104-MLR-23	CW6		11/4/2014	9:24:00 AM	VOC (Site List)	
W-141104-MLR-24	R2D		11/4/2014	10:30:00 AM	VOC (Site List)	MS/MSD

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
ANNUAL SAMPLING EVENT
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN
NOVEMBER 2014

Sample Identification	*Location*	*Matrix*	*Collection Date (mm/dd/yyyy)*	*Collection Time (hr:min)*	*Analysis/Parameters*	*Comments*
W-141104-MLR-25	MW1A		11/4/2014	11:25:00 AM	VOC (Site List)	
W-141104-MLR-26	IWD		11/4/2014	12:25:00 PM	VOC (Site List)	
W-141104-MLR-27	WSWD		11/4/2014	12:58:00 PM	VOC (Site List)	
W-141104-MLR-28	WSWD		11/4/2014	12:58:00 PM	VOC (Site List)	Duplicate (-27)
W-141104-MLR-29	W56		11/4/2014	2:25:00 PM	VOC (Site List)	
W-141104-MLR-30	C4S		11/4/2014	2:45:00 PM	VOC (Site List)	
W-141104-MLR-31	EW1 EFF		11/4/2014	3:05:00 PM	VOC (Site List)	
W-141104-MLR-32	R3D		11/4/2014	2:56:00 PM	VOC (Site List)	Rinsate Blank
W-141104-MLR-33	R3D		11/4/2014	3:40:00 PM	VOC (Site List)	
TRIP BLANK	Lab		11/4/2014	-	VOC (Site List)	

Notes:

VOC - Volatile Organic Compounds

TABLE 2

VALIDATED ANALYTICAL RESULTS SUMMARY
ANNUAL SAMPLING EVENT
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN
NOVEMBER 2014

Sample Location:			***C2S***	***C2S***	***C4S***	***CW3***	***CW6***	***E21***	***E22A***	***E24AR***	***E37A***
Sample ID:			***W-141103-MLR-07***	***W-141103-MLR-08***	***W-141104-MLR-30***	***W-141103-MLR-01***	***W-141104-MLR-23***	***W-141103-MLR-13***	***W-141103-MLR-20***	***W-141103-MLR-22***	***W-141103-MLR-21***
Sample Date:			***11/3/2014***	***11/3/2014***	***11/4/2014***	***11/3/2014***	***11/4/2014***	***11/3/2014***	***11/3/2014***	***11/3/2014***	***11/3/2014***
Sample Type:			***N***	***FB***	***N***	***N***	***N***	***N***	***N***	***N***	***N***
Sample Depth:			-	-	-	-	-	-	-	-	-
VOAs	1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U
	1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U
	Acetone	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U
	Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U
	Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U
	Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	0.23 J	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U
	cis-1,2-Dichloroethene	ug/L	0.52 J	1.0 U	1.0 U	0.58 J	0.27 J	1.0 U	3.5	120	1.1
	Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U
	Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U
	Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.6	1.0 U	1.0 U	8.1	86	2.0
	Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U
	Trichloroethene	ug/L	5.4	1.0 U	2.2	0.85 J	4.0	1.0 U	0.90 J	11	0.63 J
	Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.5	1.0 U
	Xylenes (total)	ug/L	1.0 U	0.49 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U

TABLE 2

VALIDATED ANALYTICAL RESULTS SUMMARY
ANNUAL SAMPLING EVENT
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN
NOVEMBER 2014

Sample Location:			***EW1 EFF***	***FVD5***	***FVD5***	***IWD***	***MW10A***	***MW10B***	***MW10B***	***MW1A***	***R2D***
Sample ID:			***W-141104-MLR-31***	***W-141103-MLR-11***	***W-141103-MLR-12***	***W-141104-MLR-26***	***W-141103-MLR-18***	***W-141103-MLR-16***	***W-141103-MLR-17***	***W-141104-MLR-25***	***W-141104-MLR-24***
Sample Date:			***11/4/2014***	***11/3/2014***	***11/3/2014***	***11/4/2014***	***11/3/2014***	***11/3/2014***	***11/3/2014***	***11/4/2014***	***11/4/2014***
Sample Type:			***N***	***N***	***FD***	***N***	***N***	***EB***	***N***	***N***	***N***
Sample Depth:			-	-	-	-	-	-	-	-	-
VOAs	1,1,2-Trichloroethane	ug/L	1.0 U	25 U	33 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U
	1,1-Dichloroethene	ug/L	1.0 U	25 U	33 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U
	Acetone	ug/L	10 U	250 U	330 U	10 U	10 U	10 U	10 U	12	17 U
	Benzene	ug/L	1.0 U	23 J	20 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U
	Carbon tetrachloride	ug/L	1.0 U	25 U	33 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U
	Chloroform (Trichloromethane)	ug/L	1.0 U	25 U	33 U	1.0 U	1.0 U	3.3	1.0 U	1.0 U	1.7 U
	cis-1,2-Dichloroethene	ug/L	1.0 U	25 U	33 U	0.30 J	1.0 U	1.0 U	1.0 U	1.0 U	1.2 J
	Ethylbenzene	ug/L	1.0 U	370	360	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U
	Methylene chloride	ug/L	1.0 U	25 U	33 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U
	Tetrachloroethene	ug/L	1.0 U	25 U	33 U	1.0 U	1.0 U	1.0 U	0.29 J	1.0 U	1.7 U
	Toluene	ug/L	1.0 U	23 J	21 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U
	Trichloroethene	ug/L	1.0 U	5.7 J	33 U	2.5	1.0 U	1.0 U	1.0 U	0.18 J	46
	Vinyl chloride	ug/L	1.0 U	25 U	33 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U
	Xylenes (total)	ug/L	1.0 U	980	920	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U

TABLE 2

VALIDATED ANALYTICAL RESULTS SUMMARY
ANNUAL SAMPLING EVENT
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN
NOVEMBER 2014

Sample Location:			***R3D***	***R3D***	***R4D***	***W52***	***W53A***	***W53A***	***W54***	***W55***	***W56***
Sample ID:			***W-141104-MLR-32***	***W-141104-MLR-33***	***W-141103-MLR-06***	***W-141103-MLR-09***	***W-141103-MLR-03***	***W-141103-MLR-04***	***W-141103-MLR-05***	***W-141103-MLR-10***	***W-141104-MLR-29***
Sample Date:			***11/4/2014***	***11/4/2014***	***11/3/2014***	***11/3/2014***	***11/3/2014***	***11/3/2014***	***11/3/2014***	***11/3/2014***	***11/4/2014***
Sample Type:			***EB***	***N***	***N***	***N***	***N***	***FD***	***N***	***N***	***N***
Sample Depth:			-	-	-	-	-	-	-	-	-
VOAs	1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	Acetone	ug/L	10 U	10 U	10 U	10 U	20 U	20 U	33 U	10 U	10 U
	Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	0.42 J	0.43 J	2.0 U	1.1 J	0.48 J	1.0 U
	Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	Trichloroethene	ug/L	1.0 U	2.6	1.8	8.5	73	70	95	5.9	1.0 U
	Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U
	Xylenes (total)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	3.3 U	1.0 U	1.0 U

TABLE 2

VALIDATED ANALYTICAL RESULTS SUMMARY
ANNUAL SAMPLING EVENT
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN
NOVEMBER 2014

Sample Location:			***WC3B***	***WC5A***	***WSWD***	***WSWD***	***WW4***	***WW6***	***Lab***
Sample ID:			***W-141103-MLR-15***	***W-141103-MLR-02***	***W-141104-MLR-27***	***W-141104-MLR-28***	***W-141103-MLR-19***	***W-141103-MLR-14***	***TRIP BLANK***
Sample Date:			***11/3/2014***	***11/3/2014***	***11/4/2014***	***11/4/2014***	***11/3/2014***	***11/3/2014***	***11/4/2014***
Sample Type:			***N***	***N***	***N***	***FD***	***N***	***N***	***N***
Sample Depth:			-	-	-	-	-	-	-
VOAs	1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Acetone	ug/L	4.3 J	10 U	10 U	10 U	10 U	10 U	10 U
	Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	0.94 J	1.0 U	1.0 U
	cis-1,2-Dichloroethene	ug/L	0.35 J	1.7	0.40 J	0.39 J	1.0 U	28	1.0 U
	Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	5.5	12	1.0 U	1.0 U	1.0 U	6.0	1.0 U
	Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethene	ug/L	0.46 J	0.52 J	3.2	3.8	1.0 U	5.9	1.0 U
	Vinyl chloride	ug/L	1.0 U	0.71 J	1.0 U	1.0 U	1.0 U	12	1.0 U
	Xylenes (total)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

U	- Not detected at the associated reporting limit
J	- Estimated concentration
FD	- Field Duplicate
FB	- Field Blank
EB	- Equipment/Rinsate Blank

TABLE 3

ANALYTICAL METHODS AND HOLDING TIME CRITERIA
ANNUAL SAMPLING EVENT
WAUSAU SUPERFUND SITE
WAUSAU, WISCONSIN
NOVEMBER 2014

			Holding Time	
Parameter	***Method***	***Matrix***	***Collection to Extraction (Days)***	***Collection or Extraction to Analysis (Days)***
VOC (Site List)	SW-846 8260B	Water	-	14

Notes:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-44046-1
Client Project/Site: 3978, Wausau

For:
Conestoga-Rovers & Associates, Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Denise D Heckler

Authorized for release by:
11/14/2014 1:53:39 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 240-44046-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 3978, Wausau

Report Number: 240-44046-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 11/06/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.2 C.

Signed (by CRA) chain of custodys were received via email on November 6, 2014.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples W-141103-MLR-01 (240-44046-1), W-141103-MLR-02 (240-44046-2), W-141103-MLR-03 (240-44046-3), W-141103-MLR-04 (240-44046-4), W-141103-MLR-05 (240-44046-5), W-141103-MLR-06 (240-44046-6), W-141103-MLR-07 (240-44046-7), W-141103-MLR-08 (240-44046-8), W-141103-MLR-09 (240-44046-9), W-141103-MLR-10 (240-44046-10), W-141103-MLR-11 (240-44046-11), W-141103-MLR-12 (240-44046-12), W-141103-MLR-13 (240-44046-13), W-141103-MLR-14 (240-44046-14), W-141103-MLR-15 (240-44046-15), W-141103-MLR-16 (240-44046-16), W-141103-MLR-17 (240-44046-17), W-141103-MLR-18 (240-44046-18), W-141103-MLR-19 (240-44046-19), W-141103-MLR-20 (240-44046-20), W-141103-MLR-21 (240-44046-21), W-141103-MLR-22 (240-44046-22), W-141104-MLR-23 (240-44046-23), W-141104-MLR-24 (240-44046-24), W-141104-MLR-25 (240-44046-25), W-141104-MLR-26 (240-44046-26), W-141104-MLR-27 (240-44046-27), W-141104-MLR-28 (240-44046-28), W-141104-MLR-29 (240-44046-29), W-141104-MLR-30 (240-44046-30), W-141104-MLR-31 (240-44046-31), W-141104-MLR-32 (240-44046-32), W-141104-MLR-33 (240-44046-33) and TRIP BLANK (240-44046-34) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/12/2014, 11/13/2014 and 11/14/2014.

Carbon tetrachloride failed the recovery criteria high for the MS of sample W-141104-MLR-24MS (240-44046-24) in batch 240-156300.

Job ID: 240-44046-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Carbon tetrachloride failed the recovery criteria high for the MSD of sample W-141104-MLR-24MSD (240-44046-24) in batch 240-156300.

Samples W-141103-MLR-03 (240-44046-3)[2X], W-141103-MLR-04 (240-44046-4)[2X], W-141103-MLR-05 (240-44046-5)[3.33X], W-141103-MLR-11 (240-44046-11)[25X], W-141103-MLR-12 (240-44046-12)[33.33X], W-141103-MLR-22 (240-44046-22)[4X] and W-141104-MLR-24 (240-44046-24)[1.67X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-44046-1	W-141103-MLR-01	Water	11/03/14 12:57	11/06/14 09:25
240-44046-2	W-141103-MLR-02	Water	11/03/14 13:25	11/06/14 09:25
240-44046-3	W-141103-MLR-03	Water	11/03/14 13:55	11/06/14 09:25
240-44046-4	W-141103-MLR-04	Water	11/03/14 13:55	11/06/14 09:25
240-44046-5	W-141103-MLR-05	Water	11/03/14 14:20	11/06/14 09:25
240-44046-6	W-141103-MLR-06	Water	11/03/14 14:45	11/06/14 09:25
240-44046-7	W-141103-MLR-07	Water	11/03/14 14:40	11/06/14 09:25
240-44046-8	W-141103-MLR-08	Water	11/03/14 15:05	11/06/14 09:25
240-44046-9	W-141103-MLR-09	Water	11/03/14 15:25	11/06/14 09:25
240-44046-10	W-141103-MLR-10	Water	11/03/14 15:45	11/06/14 09:25
240-44046-11	W-141103-MLR-11	Water	11/03/14 16:40	11/06/14 09:25
240-44046-12	W-141103-MLR-12	Water	11/03/14 16:40	11/06/14 09:25
240-44046-13	W-141103-MLR-13	Water	11/03/14 14:57	11/06/14 09:25
240-44046-14	W-141103-MLR-14	Water	11/03/14 15:20	11/06/14 09:25
240-44046-15	W-141103-MLR-15	Water	11/03/14 15:35	11/06/14 09:25
240-44046-16	W-141103-MLR-16	Water	11/03/14 13:55	11/06/14 09:25
240-44046-17	W-141103-MLR-17	Water	11/03/14 16:14	11/06/14 09:25
240-44046-18	W-141103-MLR-18	Water	11/03/14 16:12	11/06/14 09:25
240-44046-19	W-141103-MLR-19	Water	11/03/14 16:40	11/06/14 09:25
240-44046-20	W-141103-MLR-20	Water	11/03/14 17:05	11/06/14 09:25
240-44046-21	W-141103-MLR-21	Water	11/03/14 17:12	11/06/14 09:25
240-44046-22	W-141103-MLR-22	Water	11/03/14 17:13	11/06/14 09:25
240-44046-23	W-141104-MLR-23	Water	11/04/14 09:24	11/06/14 09:25
240-44046-24	W-141104-MLR-24	Water	11/04/14 10:30	11/06/14 09:25
240-44046-25	W-141104-MLR-25	Water	11/04/14 11:25	11/06/14 09:25
240-44046-26	W-141104-MLR-26	Water	11/04/14 12:25	11/06/14 09:25
240-44046-27	W-141104-MLR-27	Water	11/04/14 12:58	11/06/14 09:25
240-44046-28	W-141104-MLR-28	Water	11/04/14 12:58	11/06/14 09:25
240-44046-29	W-141104-MLR-29	Water	11/04/14 14:25	11/06/14 09:25
240-44046-30	W-141104-MLR-30	Water	11/04/14 14:45	11/06/14 09:25
240-44046-31	W-141104-MLR-31	Water	11/04/14 15:05	11/06/14 09:25
240-44046-32	W-141104-MLR-32	Water	11/04/14 14:56	11/06/14 09:25
240-44046-33	W-141104-MLR-33	Water	11/04/14 15:40	11/06/14 09:25
240-44046-34	TRIP BLANK	Water	11/04/14 00:00	11/06/14 09:25

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-01 — Lab Sample ID: 240-44046-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.58	J	1.0	0.20	ug/L	1		8260B	Total/NA
Tetrachloroethene	1.6		1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	0.85	J	1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-02 — Lab Sample ID: 240-44046-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.7		1.0	0.20	ug/L	1		8260B	Total/NA
Tetrachloroethene	12		1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	0.52	J	1.0	0.15	ug/L	1		8260B	Total/NA
Vinyl chloride	0.71	J	1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-03 — Lab Sample ID: 240-44046-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.43	J	2.0	0.40	ug/L	2		8260B	Total/NA
Trichloroethene	73		2.0	0.30	ug/L	2		8260B	Total/NA

Client Sample ID: W-141103-MLR-04 — Lab Sample ID: 240-44046-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	70		2.0	0.30	ug/L	2		8260B	Total/NA

Client Sample ID: W-141103-MLR-05 — Lab Sample ID: 240-44046-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.1	J	3.3	0.67	ug/L	3.33		8260B	Total/NA
Trichloroethene	95		3.3	0.50	ug/L	3.33		8260B	Total/NA

Client Sample ID: W-141103-MLR-06 — Lab Sample ID: 240-44046-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.8		1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-07 — Lab Sample ID: 240-44046-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.52	J	1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	5.4		1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-08 — Lab Sample ID: 240-44046-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.49	J	1.0	0.43	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-09 — Lab Sample ID: 240-44046-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.42	J	1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	8.5		1.0	0.15	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-10 — Lab Sample ID: 240-44046-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.48	J	1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	5.9		1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-11 — Lab Sample ID: 240-44046-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	23	J	25	6.0	ug/L	25		8260B	Total/NA
Ethylbenzene	370		25	5.8	ug/L	25		8260B	Total/NA
Toluene	23	J	25	5.5	ug/L	25		8260B	Total/NA
Trichloroethene	5.7	J	25	3.8	ug/L	25		8260B	Total/NA
Xylenes, Total	980		25	11	ug/L	25		8260B	Total/NA

Client Sample ID: W-141103-MLR-12 — Lab Sample ID: 240-44046-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	20	J	33	8.0	ug/L	33.33		8260B	Total/NA
Ethylbenzene	360		33	7.7	ug/L	33.33		8260B	Total/NA
Toluene	21	J	33	7.3	ug/L	33.33		8260B	Total/NA
Xylenes, Total	920		33	14	ug/L	33.33		8260B	Total/NA

Client Sample ID: W-141103-MLR-13 — Lab Sample ID: 240-44046-13

No Detections.

Client Sample ID: W-141103-MLR-14 — Lab Sample ID: 240-44046-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	28		1.0	0.20	ug/L	1		8260B	Total/NA
Tetrachloroethene	6.0		1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	5.9		1.0	0.15	ug/L	1		8260B	Total/NA
Vinyl chloride	12		1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-15 — Lab Sample ID: 240-44046-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.3	J	10	3.4	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.35	J	1.0	0.20	ug/L	1		8260B	Total/NA
Tetrachloroethene	5.5		1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	0.46	J	1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-16 — Lab Sample ID: 240-44046-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	3.3		1.0	0.21	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-17 — Lab Sample ID: 240-44046-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.29	J	1.0	0.20	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-18 — Lab Sample ID: 240-44046-18

No Detections.

Client Sample ID: W-141103-MLR-19 — Lab Sample ID: 240-44046-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.94	J	1.0	0.21	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-20 — Lab Sample ID: 240-44046-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.5		1.0	0.20	ug/L	1		8260B	Total/NA
Tetrachloroethene	8.1		1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	0.90	J	1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-21 — Lab Sample ID: 240-44046-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.1		1.0	0.20	ug/L	1		8260B	Total/NA
Tetrachloroethene	2.0		1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	0.63	J	1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141103-MLR-22 — Lab Sample ID: 240-44046-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	120		4.0	0.80	ug/L	4		8260B	Total/NA
Tetrachloroethene	86		4.0	0.80	ug/L	4		8260B	Total/NA
Trichloroethene	11		4.0	0.60	ug/L	4		8260B	Total/NA
Vinyl chloride	5.5		4.0	1.2	ug/L	4		8260B	Total/NA

Client Sample ID: W-141104-MLR-23 — Lab Sample ID: 240-44046-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.27	J	1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	4.0		1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141104-MLR-24 — Lab Sample ID: 240-44046-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.2	J	1.7	0.33	ug/L	1.67		8260B	Total/NA
Trichloroethene	46		1.7	0.25	ug/L	1.67		8260B	Total/NA

Client Sample ID: W-141104-MLR-25 — Lab Sample ID: 240-44046-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	12		10	3.4	ug/L	1		8260B	Total/NA
Trichloroethene	0.18	J	1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141104-MLR-26 — Lab Sample ID: 240-44046-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.30	J	1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	2.5		1.0	0.15	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-27 — Lab Sample ID: 240-44046-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.40	J	1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	3.2		1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141104-MLR-28 — Lab Sample ID: 240-44046-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.39	J	1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	3.8		1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141104-MLR-29 — Lab Sample ID: 240-44046-29

No Detections.

Client Sample ID: W-141104-MLR-30 — Lab Sample ID: 240-44046-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.23	J	1.0	0.21	ug/L	1		8260B	Total/NA
Trichloroethene	2.2		1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: W-141104-MLR-31 — Lab Sample ID: 240-44046-31

No Detections.

Client Sample ID: W-141104-MLR-32 — Lab Sample ID: 240-44046-32

No Detections.

Client Sample ID: W-141104-MLR-33 — Lab Sample ID: 240-44046-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	2.6		1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-44046-34

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-01
Date Collected: 11/03/14 12:57
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 02:35	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 02:35	1
Acetone	10	U	10	3.4	ug/L			11/13/14 02:35	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 02:35	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 02:35	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 02:35	1
cis-1,2-Dichloroethene	**0.58**	**J**	1.0	0.20	ug/L			11/13/14 02:35	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 02:35	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 02:35	1
Tetrachloroethene	**1.6**		1.0	0.20	ug/L			11/13/14 02:35	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 02:35	1
Trichloroethene	**0.85**	**J**	1.0	0.15	ug/L			11/13/14 02:35	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 02:35	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*63 - 129*		*11/13/14 02:35*	*1*
4-Bromofluorobenzene (Surr)	*85*		*66 - 120*		*11/13/14 02:35*	*1*
Toluene-d8 (Surr)	*94*		*74 - 120*		*11/13/14 02:35*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 121*		*11/13/14 02:35*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-02
Date Collected: 11/03/14 13:25
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 02:57	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 02:57	1
Acetone	10	U	10	3.4	ug/L			11/13/14 02:57	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 02:57	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 02:57	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 02:57	1
cis-1,2-Dichloroethene	**1.7**		1.0	0.20	ug/L			11/13/14 02:57	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 02:57	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 02:57	1
Tetrachloroethene	**12**		1.0	0.20	ug/L			11/13/14 02:57	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 02:57	1
Trichloroethene	**0.52**	**J**	1.0	0.15	ug/L			11/13/14 02:57	1
Vinyl chloride	**0.71**	**J**	1.0	0.29	ug/L			11/13/14 02:57	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 02:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*63 - 129*		*11/13/14 02:57*	*1*
4-Bromofluorobenzene (Surr)	*79*		*66 - 120*		*11/13/14 02:57*	*1*
Toluene-d8 (Surr)	*92*		*74 - 120*		*11/13/14 02:57*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 121*		*11/13/14 02:57*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-03
Date Collected: 11/03/14 13:55
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	2.0	U	2.0	0.34	ug/L			11/12/14 22:06	2
1,1-Dichloroethene	2.0	U	2.0	0.90	ug/L			11/12/14 22:06	2
Acetone	20	U	20	6.8	ug/L			11/12/14 22:06	2
Benzene	2.0	U	2.0	0.48	ug/L			11/12/14 22:06	2
Carbon tetrachloride	2.0	U	2.0	0.34	ug/L			11/12/14 22:06	2
Chloroform	2.0	U	2.0	0.42	ug/L			11/12/14 22:06	2
cis-1,2-Dichloroethene	**0.43**	**J**	2.0	0.40	ug/L			11/12/14 22:06	2
Ethylbenzene	2.0	U	2.0	0.46	ug/L			11/12/14 22:06	2
Methylene Chloride	2.0	U	2.0	0.56	ug/L			11/12/14 22:06	2
Tetrachloroethene	2.0	U	2.0	0.40	ug/L			11/12/14 22:06	2
Toluene	2.0	U	2.0	0.44	ug/L			11/12/14 22:06	2
Trichloroethene	**73**		2.0	0.30	ug/L			11/12/14 22:06	2
Vinyl chloride	2.0	U	2.0	0.58	ug/L			11/12/14 22:06	2
Xylenes, Total	2.0	U	2.0	0.86	ug/L			11/12/14 22:06	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*63 - 129*		*11/12/14 22:06*	*2*
4-Bromofluorobenzene (Surr)	*80*		*66 - 120*		*11/12/14 22:06*	*2*
Toluene-d8 (Surr)	*91*		*74 - 120*		*11/12/14 22:06*	*2*
Dibromofluoromethane (Surr)	*101*		*75 - 121*		*11/12/14 22:06*	*2*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-04
Date Collected: 11/03/14 13:55
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	2.0	U	2.0	0.34	ug/L			11/12/14 22:29	2
1,1-Dichloroethene	2.0	U	2.0	0.90	ug/L			11/12/14 22:29	2
Acetone	20	U	20	6.8	ug/L			11/12/14 22:29	2
Benzene	2.0	U	2.0	0.48	ug/L			11/12/14 22:29	2
Carbon tetrachloride	2.0	U	2.0	0.34	ug/L			11/12/14 22:29	2
Chloroform	2.0	U	2.0	0.42	ug/L			11/12/14 22:29	2
cis-1,2-Dichloroethene	2.0	U	2.0	0.40	ug/L			11/12/14 22:29	2
Ethylbenzene	2.0	U	2.0	0.46	ug/L			11/12/14 22:29	2
Methylene Chloride	2.0	U	2.0	0.56	ug/L			11/12/14 22:29	2
Tetrachloroethene	2.0	U	2.0	0.40	ug/L			11/12/14 22:29	2
Toluene	2.0	U	2.0	0.44	ug/L			11/12/14 22:29	2
Trichloroethene	**70**		2.0	0.30	ug/L			11/12/14 22:29	2
Vinyl chloride	2.0	U	2.0	0.58	ug/L			11/12/14 22:29	2
Xylenes, Total	2.0	U	2.0	0.86	ug/L			11/12/14 22:29	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*63 - 129*		*11/12/14 22:29*	*2*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/12/14 22:29*	*2*
Toluene-d8 (Surr)	*92*		*74 - 120*		*11/12/14 22:29*	*2*
Dibromofluoromethane (Surr)	*99*		*75 - 121*		*11/12/14 22:29*	*2*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-05
Date Collected: 11/03/14 14:20
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	3.3	U	3.3	0.57	ug/L			11/12/14 22:51	3.33
1,1-Dichloroethene	3.3	U	3.3	1.5	ug/L			11/12/14 22:51	3.33
Acetone	33	U	33	11	ug/L			11/12/14 22:51	3.33
Benzene	3.3	U	3.3	0.80	ug/L			11/12/14 22:51	3.33
Carbon tetrachloride	3.3	U	3.3	0.57	ug/L			11/12/14 22:51	3.33
Chloroform	3.3	U	3.3	0.70	ug/L			11/12/14 22:51	3.33
cis-1,2-Dichloroethene	**1.1**	**J**	3.3	0.67	ug/L			11/12/14 22:51	3.33
Ethylbenzene	3.3	U	3.3	0.77	ug/L			11/12/14 22:51	3.33
Methylene Chloride	3.3	U	3.3	0.93	ug/L			11/12/14 22:51	3.33
Tetrachloroethene	3.3	U	3.3	0.67	ug/L			11/12/14 22:51	3.33
Toluene	3.3	U	3.3	0.73	ug/L			11/12/14 22:51	3.33
Trichloroethene	**95**		3.3	0.50	ug/L			11/12/14 22:51	3.33
Vinyl chloride	3.3	U	3.3	0.97	ug/L			11/12/14 22:51	3.33
Xylenes, Total	3.3	U	3.3	1.4	ug/L			11/12/14 22:51	3.33

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*63 - 129*		*11/12/14 22:51*	*3.33*
4-Bromofluorobenzene (Surr)	*79*		*66 - 120*		*11/12/14 22:51*	*3.33*
Toluene-d8 (Surr)	*91*		*74 - 120*		*11/12/14 22:51*	*3.33*
Dibromofluoromethane (Surr)	*101*		*75 - 121*		*11/12/14 22:51*	*3.33*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-06
Date Collected: 11/03/14 14:45
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 03:20	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 03:20	1
Acetone	10	U	10	3.4	ug/L			11/13/14 03:20	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 03:20	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 03:20	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 03:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 03:20	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 03:20	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 03:20	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 03:20	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 03:20	1
Trichloroethene	**1.8**		1.0	0.15	ug/L			11/13/14 03:20	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 03:20	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*63 - 129*		*11/13/14 03:20*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/13/14 03:20*	*1*
Toluene-d8 (Surr)	*92*		*74 - 120*		*11/13/14 03:20*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 121*		*11/13/14 03:20*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-07
Date Collected: 11/03/14 14:40
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 03:42	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 03:42	1
Acetone	10	U	10	3.4	ug/L			11/13/14 03:42	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 03:42	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 03:42	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 03:42	1
cis-1,2-Dichloroethene	**0.52**	**J**	1.0	0.20	ug/L			11/13/14 03:42	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 03:42	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 03:42	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 03:42	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 03:42	1
Trichloroethene	**5.4**		1.0	0.15	ug/L			11/13/14 03:42	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 03:42	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 03:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*63 - 129*		*11/13/14 03:42*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/13/14 03:42*	*1*
Toluene-d8 (Surr)	*92*		*74 - 120*		*11/13/14 03:42*	*1*
Dibromofluoromethane (Surr)	*106*		*75 - 121*		*11/13/14 03:42*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-08
Date Collected: 11/03/14 15:05
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 04:05	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 04:05	1
Acetone	10	U	10	3.4	ug/L			11/13/14 04:05	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 04:05	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 04:05	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 04:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 04:05	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 04:05	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 04:05	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 04:05	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 04:05	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/13/14 04:05	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 04:05	1
Xylenes, Total	**0.49**	**J**	1.0	0.43	ug/L			11/13/14 04:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*63 - 129*		*11/13/14 04:05*	*1*
4-Bromofluorobenzene (Surr)	*84*		*66 - 120*		*11/13/14 04:05*	*1*
Toluene-d8 (Surr)	*88*		*74 - 120*		*11/13/14 04:05*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 121*		*11/13/14 04:05*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-09
Date Collected: 11/03/14 15:25
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 04:27	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 04:27	1
Acetone	10	U	10	3.4	ug/L			11/13/14 04:27	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 04:27	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 04:27	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 04:27	1
cis-1,2-Dichloroethene	**0.42**	**J**	1.0	0.20	ug/L			11/13/14 04:27	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 04:27	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 04:27	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 04:27	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 04:27	1
Trichloroethene	**8.5**		1.0	0.15	ug/L			11/13/14 04:27	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 04:27	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 04:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*63 - 129*		*11/13/14 04:27*	*1*
4-Bromofluorobenzene (Surr)	*79*		*66 - 120*		*11/13/14 04:27*	*1*
Toluene-d8 (Surr)	*90*		*74 - 120*		*11/13/14 04:27*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 121*		*11/13/14 04:27*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-10
Date Collected: 11/03/14 15:45
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-10
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 04:49	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 04:49	1
Acetone	10	U	10	3.4	ug/L			11/13/14 04:49	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 04:49	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 04:49	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 04:49	1
cis-1,2-Dichloroethene	**0.48**	**J**	1.0	0.20	ug/L			11/13/14 04:49	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 04:49	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 04:49	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 04:49	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 04:49	1
Trichloroethene	**5.9**		1.0	0.15	ug/L			11/13/14 04:49	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 04:49	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 04:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*63 - 129*		*11/13/14 04:49*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/13/14 04:49*	*1*
Toluene-d8 (Surr)	*92*		*74 - 120*		*11/13/14 04:49*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 121*		*11/13/14 04:49*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-11
Date Collected: 11/03/14 16:40
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	25	U	25	4.3	ug/L			11/12/14 23:14	25
1,1-Dichloroethene	25	U	25	11	ug/L			11/12/14 23:14	25
Acetone	250	U	250	86	ug/L			11/12/14 23:14	25
Benzene	**23**	**J**	25	6.0	ug/L			11/12/14 23:14	25
Carbon tetrachloride	25	U	25	4.3	ug/L			11/12/14 23:14	25
Chloroform	25	U	25	5.3	ug/L			11/12/14 23:14	25
cis-1,2-Dichloroethene	25	U	25	5.0	ug/L			11/12/14 23:14	25
Ethylbenzene	**370**		25	5.8	ug/L			11/12/14 23:14	25
Methylene Chloride	25	U	25	7.0	ug/L			11/12/14 23:14	25
Tetrachloroethene	25	U	25	5.0	ug/L			11/12/14 23:14	25
Toluene	**23**	**J**	25	5.5	ug/L			11/12/14 23:14	25
Trichloroethene	**5.7**	**J**	25	3.8	ug/L			11/12/14 23:14	25
Vinyl chloride	25	U	25	7.3	ug/L			11/12/14 23:14	25
Xylenes, Total	**980**		25	11	ug/L			11/12/14 23:14	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*63 - 129*		*11/12/14 23:14*	*25*
4-Bromofluorobenzene (Surr)	*85*		*66 - 120*		*11/12/14 23:14*	*25*
Toluene-d8 (Surr)	*94*		*74 - 120*		*11/12/14 23:14*	*25*
Dibromofluoromethane (Surr)	*100*		*75 - 121*		*11/12/14 23:14*	*25*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-12
Date Collected: 11/03/14 16:40
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-12
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	33	U	33	5.7	ug/L			11/12/14 23:36	33.33
1,1-Dichloroethene	33	U	33	15	ug/L			11/12/14 23:36	33.33
Acetone	330	U	330	110	ug/L			11/12/14 23:36	33.33
Benzene	**20**	**J**	33	8.0	ug/L			11/12/14 23:36	33.33
Carbon tetrachloride	33	U	33	5.7	ug/L			11/12/14 23:36	33.33
Chloroform	33	U	33	7.0	ug/L			11/12/14 23:36	33.33
cis-1,2-Dichloroethene	33	U	33	6.7	ug/L			11/12/14 23:36	33.33
Ethylbenzene	**360**		33	7.7	ug/L			11/12/14 23:36	33.33
Methylene Chloride	33	U	33	9.3	ug/L			11/12/14 23:36	33.33
Tetrachloroethene	33	U	33	6.7	ug/L			11/12/14 23:36	33.33
Toluene	**21**	**J**	33	7.3	ug/L			11/12/14 23:36	33.33
Trichloroethene	33	U	33	5.0	ug/L			11/12/14 23:36	33.33
Vinyl chloride	33	U	33	9.7	ug/L			11/12/14 23:36	33.33
Xylenes, Total	**920**		33	14	ug/L			11/12/14 23:36	33.33

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*63 - 129*		*11/12/14 23:36*	*33.33*
4-Bromofluorobenzene (Surr)	*86*		*66 - 120*		*11/12/14 23:36*	*33.33*
Toluene-d8 (Surr)	*92*		*74 - 120*		*11/12/14 23:36*	*33.33*
Dibromofluoromethane (Surr)	*99*		*75 - 121*		*11/12/14 23:36*	*33.33*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-13
Date Collected: 11/03/14 14:57
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-13
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 18:27	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 18:27	1
Acetone	10	U	10	3.4	ug/L			11/13/14 18:27	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 18:27	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 18:27	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 18:27	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 18:27	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 18:27	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 18:27	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 18:27	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 18:27	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/13/14 18:27	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 18:27	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*63 - 129*		*11/13/14 18:27*	*1*
4-Bromofluorobenzene (Surr)	*85*		*66 - 120*		*11/13/14 18:27*	*1*
Toluene-d8 (Surr)	*90*		*74 - 120*		*11/13/14 18:27*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 121*		*11/13/14 18:27*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-14
Date Collected: 11/03/14 15:20
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-14
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 05:12	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 05:12	1
Acetone	10	U	10	3.4	ug/L			11/13/14 05:12	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 05:12	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 05:12	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 05:12	1
cis-1,2-Dichloroethene	**28**		1.0	0.20	ug/L			11/13/14 05:12	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 05:12	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 05:12	1
Tetrachloroethene	**6.0**		1.0	0.20	ug/L			11/13/14 05:12	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 05:12	1
Trichloroethene	**5.9**		1.0	0.15	ug/L			11/13/14 05:12	1
Vinyl chloride	**12**		1.0	0.29	ug/L			11/13/14 05:12	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 05:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*63 - 129*		*11/13/14 05:12*	*1*
4-Bromofluorobenzene (Surr)	*86*		*66 - 120*		*11/13/14 05:12*	*1*
Toluene-d8 (Surr)	*94*		*74 - 120*		*11/13/14 05:12*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 121*		*11/13/14 05:12*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-15
Date Collected: 11/03/14 15:35
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-15
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 05:34	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 05:34	1
Acetone	**4.3**	**J**	10	3.4	ug/L			11/13/14 05:34	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 05:34	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 05:34	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 05:34	1
cis-1,2-Dichloroethene	**0.35**	**J**	1.0	0.20	ug/L			11/13/14 05:34	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 05:34	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 05:34	1
Tetrachloroethene	**5.5**		1.0	0.20	ug/L			11/13/14 05:34	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 05:34	1
Trichloroethene	**0.46**	**J**	1.0	0.15	ug/L			11/13/14 05:34	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 05:34	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 05:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*63 - 129*		*11/13/14 05:34*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/13/14 05:34*	*1*
Toluene-d8 (Surr)	*95*		*74 - 120*		*11/13/14 05:34*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 121*		*11/13/14 05:34*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-16
Date Collected: 11/03/14 13:55
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-16
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 05:57	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 05:57	1
Acetone	10	U	10	3.4	ug/L			11/13/14 05:57	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 05:57	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 05:57	1
Chloroform	**3.3**		1.0	0.21	ug/L			11/13/14 05:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 05:57	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 05:57	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 05:57	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 05:57	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 05:57	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/13/14 05:57	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 05:57	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*63 - 129*		*11/13/14 05:57*	*1*
4-Bromofluorobenzene (Surr)	*82*		*66 - 120*		*11/13/14 05:57*	*1*
Toluene-d8 (Surr)	*90*		*74 - 120*		*11/13/14 05:57*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 121*		*11/13/14 05:57*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-17
Date Collected: 11/03/14 16:14
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-17
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 06:19	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 06:19	1
Acetone	10	U	10	3.4	ug/L			11/13/14 06:19	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 06:19	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 06:19	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 06:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 06:19	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 06:19	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 06:19	1
Tetrachloroethene	**0.29**	**J**	1.0	0.20	ug/L			11/13/14 06:19	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 06:19	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/13/14 06:19	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 06:19	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*63 - 129*		*11/13/14 06:19*	*1*
4-Bromofluorobenzene (Surr)	*84*		*66 - 120*		*11/13/14 06:19*	*1*
Toluene-d8 (Surr)	*91*		*74 - 120*		*11/13/14 06:19*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 121*		*11/13/14 06:19*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-18
Date Collected: 11/03/14 16:12
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-18
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 06:41	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 06:41	1
Acetone	10	U	10	3.4	ug/L			11/13/14 06:41	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 06:41	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 06:41	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 06:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 06:41	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 06:41	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 06:41	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 06:41	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 06:41	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/13/14 06:41	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 06:41	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 06:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*63 - 129*		*11/13/14 06:41*	*1*
4-Bromofluorobenzene (Surr)	*84*		*66 - 120*		*11/13/14 06:41*	*1*
Toluene-d8 (Surr)	*95*		*74 - 120*		*11/13/14 06:41*	*1*
Dibromofluoromethane (Surr)	*106*		*75 - 121*		*11/13/14 06:41*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-19
Date Collected: 11/03/14 16:40
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-19
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 07:04	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 07:04	1
Acetone	10	U	10	3.4	ug/L			11/13/14 07:04	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 07:04	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 07:04	1
Chloroform	**0.94**	**J**	1.0	0.21	ug/L			11/13/14 07:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 07:04	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 07:04	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 07:04	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 07:04	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 07:04	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/13/14 07:04	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 07:04	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 07:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*63 - 129*		*11/13/14 07:04*	*1*
4-Bromofluorobenzene (Surr)	*81*		*66 - 120*		*11/13/14 07:04*	*1*
Toluene-d8 (Surr)	*89*		*74 - 120*		*11/13/14 07:04*	*1*
Dibromofluoromethane (Surr)	*101*		*75 - 121*		*11/13/14 07:04*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-20
Date Collected: 11/03/14 17:05
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-20
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 07:26	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 07:26	1
Acetone	10	U	10	3.4	ug/L			11/13/14 07:26	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 07:26	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 07:26	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 07:26	1
cis-1,2-Dichloroethene	**3.5**		1.0	0.20	ug/L			11/13/14 07:26	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 07:26	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 07:26	1
Tetrachloroethene	**8.1**		1.0	0.20	ug/L			11/13/14 07:26	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 07:26	1
Trichloroethene	**0.90**	**J**	1.0	0.15	ug/L			11/13/14 07:26	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 07:26	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 07:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*63 - 129*		*11/13/14 07:26*	*1*
4-Bromofluorobenzene (Surr)	*82*		*66 - 120*		*11/13/14 07:26*	*1*
Toluene-d8 (Surr)	*92*		*74 - 120*		*11/13/14 07:26*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 121*		*11/13/14 07:26*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-21
Date Collected: 11/03/14 17:12
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-21
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 07:48	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 07:48	1
Acetone	10	U	10	3.4	ug/L			11/13/14 07:48	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 07:48	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 07:48	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 07:48	1
cis-1,2-Dichloroethene	**1.1**		1.0	0.20	ug/L			11/13/14 07:48	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 07:48	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 07:48	1
Tetrachloroethene	**2.0**		1.0	0.20	ug/L			11/13/14 07:48	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 07:48	1
Trichloroethene	**0.63**	**J**	1.0	0.15	ug/L			11/13/14 07:48	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 07:48	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 07:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*63 - 129*		*11/13/14 07:48*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/13/14 07:48*	*1*
Toluene-d8 (Surr)	*93*		*74 - 120*		*11/13/14 07:48*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 121*		*11/13/14 07:48*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-22
Date Collected: 11/03/14 17:13
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-22
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	4.0	U	4.0	0.68	ug/L			11/12/14 21:43	4
1,1-Dichloroethene	4.0	U	4.0	1.8	ug/L			11/12/14 21:43	4
Acetone	40	U	40	14	ug/L			11/12/14 21:43	4
Benzene	4.0	U	4.0	0.96	ug/L			11/12/14 21:43	4
Carbon tetrachloride	4.0	U	4.0	0.68	ug/L			11/12/14 21:43	4
Chloroform	4.0	U	4.0	0.84	ug/L			11/12/14 21:43	4
cis-1,2-Dichloroethene	**120**		4.0	0.80	ug/L			11/12/14 21:43	4
Ethylbenzene	4.0	U	4.0	0.92	ug/L			11/12/14 21:43	4
Methylene Chloride	4.0	U	4.0	1.1	ug/L			11/12/14 21:43	4
Tetrachloroethene	**86**		4.0	0.80	ug/L			11/12/14 21:43	4
Toluene	4.0	U	4.0	0.88	ug/L			11/12/14 21:43	4
Trichloroethene	**11**		4.0	0.60	ug/L			11/12/14 21:43	4
Vinyl chloride	**5.5**		4.0	1.2	ug/L			11/12/14 21:43	4
Xylenes, Total	4.0	U	4.0	1.7	ug/L			11/12/14 21:43	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*63 - 129*		*11/12/14 21:43*	*4*
4-Bromofluorobenzene (Surr)	*81*		*66 - 120*		*11/12/14 21:43*	*4*
Toluene-d8 (Surr)	*88*		*74 - 120*		*11/12/14 21:43*	*4*
Dibromofluoromethane (Surr)	*102*		*75 - 121*		*11/12/14 21:43*	*4*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-23
Date Collected: 11/04/14 09:24
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-23
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 08:11	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 08:11	1
Acetone	10	U	10	3.4	ug/L			11/13/14 08:11	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 08:11	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 08:11	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 08:11	1
cis-1,2-Dichloroethene	**0.27**	**J**	1.0	0.20	ug/L			11/13/14 08:11	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 08:11	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 08:11	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 08:11	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 08:11	1
Trichloroethene	**4.0**		1.0	0.15	ug/L			11/13/14 08:11	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 08:11	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 08:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*63 - 129*		*11/13/14 08:11*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/13/14 08:11*	*1*
Toluene-d8 (Surr)	*91*		*74 - 120*		*11/13/14 08:11*	*1*
Dibromofluoromethane (Surr)	*96*		*75 - 121*		*11/13/14 08:11*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-24
Date Collected: 11/04/14 10:30
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-24
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.7	U	1.7	0.28	ug/L			11/13/14 10:02	1.67
1,1-Dichloroethene	1.7	U	1.7	0.75	ug/L			11/13/14 10:02	1.67
Acetone	17	U	17	5.7	ug/L			11/13/14 10:02	1.67
Benzene	1.7	U	1.7	0.40	ug/L			11/13/14 10:02	1.67
Carbon tetrachloride	1.7	U	1.7	0.28	ug/L			11/13/14 10:02	1.67
Chloroform	1.7	U	1.7	0.35	ug/L			11/13/14 10:02	1.67
cis-1,2-Dichloroethene	**1.2**	**J**	1.7	0.33	ug/L			11/13/14 10:02	1.67
Ethylbenzene	1.7	U	1.7	0.38	ug/L			11/13/14 10:02	1.67
Methylene Chloride	1.7	U	1.7	0.47	ug/L			11/13/14 10:02	1.67
Tetrachloroethene	1.7	U	1.7	0.33	ug/L			11/13/14 10:02	1.67
Toluene	1.7	U	1.7	0.37	ug/L			11/13/14 10:02	1.67
Trichloroethene	**46**		1.7	0.25	ug/L			11/13/14 10:02	1.67
Vinyl chloride	1.7	U	1.7	0.48	ug/L			11/13/14 10:02	1.67
Xylenes, Total	1.7	U	1.7	0.72	ug/L			11/13/14 10:02	1.67

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*63 - 129*		*11/13/14 10:02*	*1.67*
4-Bromofluorobenzene (Surr)	*80*		*66 - 120*		*11/13/14 10:02*	*1.67*
Toluene-d8 (Surr)	*92*		*74 - 120*		*11/13/14 10:02*	*1.67*
Dibromofluoromethane (Surr)	*101*		*75 - 121*		*11/13/14 10:02*	*1.67*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-25
Date Collected: 11/04/14 11:25
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-25
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 08:55	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 08:55	1
Acetone	**12**		10	3.4	ug/L			11/13/14 08:55	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 08:55	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 08:55	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 08:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 08:55	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 08:55	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 08:55	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 08:55	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 08:55	1
Trichloroethene	**0.18**	**J**	1.0	0.15	ug/L			11/13/14 08:55	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 08:55	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 08:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*63 - 129*		*11/13/14 08:55*	*1*
4-Bromofluorobenzene (Surr)	*81*		*66 - 120*		*11/13/14 08:55*	*1*
Toluene-d8 (Surr)	*91*		*74 - 120*		*11/13/14 08:55*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 121*		*11/13/14 08:55*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-26
Date Collected: 11/04/14 12:25
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-26
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 09:17	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 09:17	1
Acetone	10	U	10	3.4	ug/L			11/13/14 09:17	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 09:17	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 09:17	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 09:17	1
cis-1,2-Dichloroethene	**0.30**	**J**	1.0	0.20	ug/L			11/13/14 09:17	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 09:17	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 09:17	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 09:17	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 09:17	1
Trichloroethene	**2.5**		1.0	0.15	ug/L			11/13/14 09:17	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 09:17	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 09:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*63 - 129*		*11/13/14 09:17*	*1*
4-Bromofluorobenzene (Surr)	*84*		*66 - 120*		*11/13/14 09:17*	*1*
Toluene-d8 (Surr)	*94*		*74 - 120*		*11/13/14 09:17*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 121*		*11/13/14 09:17*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-27
Date Collected: 11/04/14 12:58
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-27
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 02:21	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 02:21	1
Acetone	10	U	10	3.4	ug/L			11/14/14 02:21	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 02:21	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 02:21	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/14/14 02:21	1
cis-1,2-Dichloroethene	**0.40**	**J**	1.0	0.20	ug/L			11/14/14 02:21	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 02:21	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 02:21	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 02:21	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 02:21	1
Trichloroethene	**3.2**		1.0	0.15	ug/L			11/14/14 02:21	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 02:21	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*63 - 129*		*11/14/14 02:21*	*1*
4-Bromofluorobenzene (Surr)	*87*		*66 - 120*		*11/14/14 02:21*	*1*
Toluene-d8 (Surr)	*85*		*74 - 120*		*11/14/14 02:21*	*1*
Dibromofluoromethane (Surr)	*85*		*75 - 121*		*11/14/14 02:21*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-28
Date Collected: 11/04/14 12:58
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-28
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 02:44	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 02:44	1
Acetone	10	U	10	3.4	ug/L			11/14/14 02:44	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 02:44	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 02:44	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/14/14 02:44	1
cis-1,2-Dichloroethene	**0.39**	**J**	1.0	0.20	ug/L			11/14/14 02:44	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 02:44	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 02:44	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 02:44	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 02:44	1
Trichloroethene	**3.8**		1.0	0.15	ug/L			11/14/14 02:44	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 02:44	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 02:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*63 - 129*		*11/14/14 02:44*	*1*
4-Bromofluorobenzene (Surr)	*87*		*66 - 120*		*11/14/14 02:44*	*1*
Toluene-d8 (Surr)	*88*		*74 - 120*		*11/14/14 02:44*	*1*
Dibromofluoromethane (Surr)	*85*		*75 - 121*		*11/14/14 02:44*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-29
Date Collected: 11/04/14 14:25
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-29
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 03:06	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 03:06	1
Acetone	10	U	10	3.4	ug/L			11/14/14 03:06	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 03:06	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 03:06	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/14/14 03:06	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 03:06	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 03:06	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 03:06	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 03:06	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 03:06	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/14/14 03:06	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 03:06	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*63 - 129*		*11/14/14 03:06*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/14/14 03:06*	*1*
Toluene-d8 (Surr)	*86*		*74 - 120*		*11/14/14 03:06*	*1*
Dibromofluoromethane (Surr)	*86*		*75 - 121*		*11/14/14 03:06*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-30
Date Collected: 11/04/14 14:45
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-30
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 03:28	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 03:28	1
Acetone	10	U	10	3.4	ug/L			11/14/14 03:28	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 03:28	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 03:28	1
Chloroform	**0.23**	**J**	1.0	0.21	ug/L			11/14/14 03:28	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 03:28	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 03:28	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 03:28	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 03:28	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 03:28	1
Trichloroethene	**2.2**		1.0	0.15	ug/L			11/14/14 03:28	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 03:28	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*63 - 129*		*11/14/14 03:28*	*1*
4-Bromofluorobenzene (Surr)	*87*		*66 - 120*		*11/14/14 03:28*	*1*
Toluene-d8 (Surr)	*91*		*74 - 120*		*11/14/14 03:28*	*1*
Dibromofluoromethane (Surr)	*87*		*75 - 121*		*11/14/14 03:28*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-31
Date Collected: 11/04/14 15:05
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-31
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 03:51	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 03:51	1
Acetone	10	U	10	3.4	ug/L			11/14/14 03:51	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 03:51	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 03:51	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/14/14 03:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 03:51	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 03:51	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 03:51	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 03:51	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 03:51	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/14/14 03:51	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 03:51	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*63 - 129*		*11/14/14 03:51*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/14/14 03:51*	*1*
Toluene-d8 (Surr)	*86*		*74 - 120*		*11/14/14 03:51*	*1*
Dibromofluoromethane (Surr)	*81*		*75 - 121*		*11/14/14 03:51*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-32
Date Collected: 11/04/14 14:56
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-32
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 04:13	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 04:13	1
Acetone	10	U	10	3.4	ug/L			11/14/14 04:13	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 04:13	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 04:13	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/14/14 04:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 04:13	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 04:13	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 04:13	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 04:13	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 04:13	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/14/14 04:13	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 04:13	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*63 - 129*		*11/14/14 04:13*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/14/14 04:13*	*1*
Toluene-d8 (Surr)	*87*		*74 - 120*		*11/14/14 04:13*	*1*
Dibromofluoromethane (Surr)	*84*		*75 - 121*		*11/14/14 04:13*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-33
Date Collected: 11/04/14 15:40
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-33
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 04:35	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 04:35	1
Acetone	10	U	10	3.4	ug/L			11/14/14 04:35	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 04:35	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 04:35	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/14/14 04:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 04:35	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 04:35	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 04:35	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 04:35	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 04:35	1
Trichloroethene	**2.6**		1.0	0.15	ug/L			11/14/14 04:35	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 04:35	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 04:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*63 - 129*		*11/14/14 04:35*	*1*
4-Bromofluorobenzene (Surr)	*85*		*66 - 120*		*11/14/14 04:35*	*1*
Toluene-d8 (Surr)	*88*		*74 - 120*		*11/14/14 04:35*	*1*
Dibromofluoromethane (Surr)	*82*		*75 - 121*		*11/14/14 04:35*	*1*

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: TRIP BLANK
Date Collected: 11/04/14 00:00
Date Received: 11/06/14 09:25

Lab Sample ID: 240-44046-34
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 04:57	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 04:57	1
Acetone	10	U	10	3.4	ug/L			11/14/14 04:57	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 04:57	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 04:57	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/14/14 04:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 04:57	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 04:57	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 04:57	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 04:57	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 04:57	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/14/14 04:57	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 04:57	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 04:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*63 - 129*		*11/14/14 04:57*	*1*
4-Bromofluorobenzene (Surr)	*82*		*66 - 120*		*11/14/14 04:57*	*1*
Toluene-d8 (Surr)	*85*		*74 - 120*		*11/14/14 04:57*	*1*
Dibromofluoromethane (Surr)	*84*		*75 - 121*		*11/14/14 04:57*	*1*

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(63-129)	(66-120)	(74-120)	(75-121)
240-44046-1	W-141103-MLR-01	102	85	94	105
240-44046-2	W-141103-MLR-02	105	79	92	107
240-44046-3	W-141103-MLR-03	105	80	91	101
240-44046-4	W-141103-MLR-04	107	83	92	99
240-44046-5	W-141103-MLR-05	105	79	91	101
240-44046-6	W-141103-MLR-06	104	83	92	100
240-44046-7	W-141103-MLR-07	108	83	92	106
240-44046-8	W-141103-MLR-08	103	84	88	105
240-44046-9	W-141103-MLR-09	111	79	90	104
240-44046-10	W-141103-MLR-10	110	83	92	102
240-44046-11	W-141103-MLR-11	108	85	94	100
240-44046-12	W-141103-MLR-12	103	86	92	99
240-44046-13	W-141103-MLR-13	114	85	90	97
240-44046-13 MS	W-141103-MLR-13	113	91	93	93
240-44046-13 MSD	W-141103-MLR-13	114	87	94	99
240-44046-14	W-141103-MLR-14	110	86	94	100
240-44046-15	W-141103-MLR-15	108	83	95	105
240-44046-16	W-141103-MLR-16	101	82	90	100
240-44046-17	W-141103-MLR-17	109	84	91	105
240-44046-18	W-141103-MLR-18	106	84	95	106
240-44046-19	W-141103-MLR-19	104	81	89	101
240-44046-20	W-141103-MLR-20	107	82	92	102
240-44046-21	W-141103-MLR-21	106	83	93	104
240-44046-22	W-141103-MLR-22	104	81	88	102
240-44046-23	W-141104-MLR-23	107	83	91	96
240-44046-24	W-141104-MLR-24	106	80	92	101
240-44046-24 MS	W-141104-MLR-24	104	86	92	102
240-44046-24 MSD	W-141104-MLR-24	107	82	92	102
240-44046-25	W-141104-MLR-25	103	81	91	105
240-44046-26	W-141104-MLR-26	104	84	94	98
240-44046-27	W-141104-MLR-27	79	87	85	85
240-44046-28	W-141104-MLR-28	84	87	88	85
240-44046-29	W-141104-MLR-29	84	83	86	86
240-44046-30	W-141104-MLR-30	86	87	91	87
240-44046-31	W-141104-MLR-31	83	83	86	81
240-44046-32	W-141104-MLR-32	82	83	87	84
240-44046-33	W-141104-MLR-33	82	85	88	82
240-44046-34	TRIP BLANK	80	82	85	84
LCS 240-156293/4	Lab Control Sample	106	86	97	105
LCS 240-156300/3	Lab Control Sample	106	84	95	99
LCS 240-156478/4	Lab Control Sample	76	91	88	78
LCS 240-156481/4	Lab Control Sample	112	89	95	93
MB 240-156293/6	Method Blank	103	83	90	107
MB 240-156300/4	Method Blank	107	82	90	100
MB 240-156478/5	Method Blank	79	81	83	81
MB 240-156481/6	Method Blank	111	91	95	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-156293/6
Matrix: Water
Analysis Batch: 156293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/12/14 16:00	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/12/14 16:00	1
Acetone	10	U	10	3.4	ug/L			11/12/14 16:00	1
Benzene	1.0	U	1.0	0.24	ug/L			11/12/14 16:00	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/12/14 16:00	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/12/14 16:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/12/14 16:00	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/12/14 16:00	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/12/14 16:00	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/12/14 16:00	1
Toluene	1.0	U	1.0	0.22	ug/L			11/12/14 16:00	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/12/14 16:00	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/12/14 16:00	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/12/14 16:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*63 - 129*		*11/12/14 16:00*	*1*
4-Bromofluorobenzene (Surr)	*83*		*66 - 120*		*11/12/14 16:00*	*1*
Toluene-d8 (Surr)	*90*		*74 - 120*		*11/12/14 16:00*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 121*		*11/12/14 16:00*	*1*

Lab Sample ID: LCS 240-156293/4
Matrix: Water
Analysis Batch: 156293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	10.0	9.13		ug/L		91	80 - 120
1,1-Dichloroethene	10.0	10.2		ug/L		102	78 - 131
Acetone	20.0	17.0		ug/L		85	43 - 136
Benzene	10.0	9.86		ug/L		99	80 - 120
Carbon tetrachloride	10.0	12.3		ug/L		123	66 - 128
Chloroform	10.0	10.3		ug/L		103	79 - 120
cis-1,2-Dichloroethene	10.0	9.71		ug/L		97	80 - 120
Ethylbenzene	10.0	10.2		ug/L		102	80 - 120
m-Xylene & p-Xylene	10.0	9.96		ug/L		100	80 - 120
Methylene Chloride	10.0	9.50		ug/L		95	66 - 131
o-Xylene	10.0	9.76		ug/L		98	80 - 120
Tetrachloroethene	10.0	11.5		ug/L		115	79 - 120
Toluene	10.0	10.2		ug/L		102	80 - 120
Trichloroethene	10.0	10.9		ug/L		109	76 - 120
Vinyl chloride	10.0	10.1		ug/L		101	53 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*63 - 129*
4-Bromofluorobenzene (Surr)	*86*		*66 - 120*
Toluene-d8 (Surr)	*97*		*74 - 120*
Dibromofluoromethane (Surr)	*105*		*75 - 121*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-156300/4
Matrix: Water
Analysis Batch: 156300

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 02:13	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 02:13	1
Acetone	10	U	10	3.4	ug/L			11/13/14 02:13	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 02:13	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 02:13	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 02:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 02:13	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 02:13	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 02:13	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 02:13	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 02:13	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/13/14 02:13	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 02:13	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 02:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*63 - 129*		*11/13/14 02:13*	*1*
4-Bromofluorobenzene (Surr)	*82*		*66 - 120*		*11/13/14 02:13*	*1*
Toluene-d8 (Surr)	*90*		*74 - 120*		*11/13/14 02:13*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 121*		*11/13/14 02:13*	*1*

Lab Sample ID: LCS 240-156300/3
Matrix: Water
Analysis Batch: 156300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	10.0	8.64		ug/L		86	80 - 120
1,1-Dichloroethene	10.0	9.05		ug/L		91	78 - 131
Acetone	20.0	15.9		ug/L		80	43 - 136
Benzene	10.0	8.98		ug/L		90	80 - 120
Carbon tetrachloride	10.0	10.9		ug/L		109	66 - 128
Chloroform	10.0	9.53		ug/L		95	79 - 120
cis-1,2-Dichloroethene	10.0	8.96		ug/L		90	80 - 120
Ethylbenzene	10.0	9.06		ug/L		91	80 - 120
m-Xylene & p-Xylene	10.0	8.71		ug/L		87	80 - 120
Methylene Chloride	10.0	9.00		ug/L		90	66 - 131
o-Xylene	10.0	8.71		ug/L		87	80 - 120
Tetrachloroethene	10.0	9.39		ug/L		94	79 - 120
Toluene	10.0	9.03		ug/L		90	80 - 120
Trichloroethene	10.0	10.3		ug/L		103	76 - 120
Vinyl chloride	10.0	9.11		ug/L		91	53 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*63 - 129*
4-Bromofluorobenzene (Surr)	*84*		*66 - 120*
Toluene-d8 (Surr)	*95*		*74 - 120*
Dibromofluoromethane (Surr)	*99*		*75 - 121*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-44046-24 MS
Matrix: Water
Analysis Batch: 156300

Client Sample ID: W-141104-MLR-24
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	1.7	U	16.7	17.5		ug/L		105	75 - 120
1,1-Dichloroethene	1.7	U	16.7	19.5		ug/L		117	74 - 135
Acetone	17	U	33.4	24.2		ug/L		72	33 - 145
Benzene	1.7	U	16.7	17.8		ug/L		106	72 - 121
Carbon tetrachloride	1.7	U	16.7	22.6	F1	ug/L		135	59 - 129
Chloroform	1.7	U	16.7	19.0		ug/L		114	76 - 120
cis-1,2-Dichloroethene	1.2	J	16.7	18.6		ug/L		104	70 - 120
Ethylbenzene	1.7	U	16.7	18.5		ug/L		111	75 - 120
m-Xylene & p-Xylene	1.7	U	16.7	17.5		ug/L		105	75 - 120
Methylene Chloride	1.7	U	16.7	18.4		ug/L		110	63 - 128
o-Xylene	1.7	U	16.7	17.5		ug/L		105	76 - 120
Tetrachloroethene	1.7	U	16.7	19.2		ug/L		115	70 - 120
Toluene	1.7	U	16.7	18.1		ug/L		108	78 - 120
Trichloroethene	46		16.7	65.3		ug/L		118	66 - 120
Vinyl chloride	1.7	U	16.7	15.7		ug/L		94	49 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*63 - 129*
4-Bromofluorobenzene (Surr)	*86*		*66 - 120*
Toluene-d8 (Surr)	*92*		*74 - 120*
Dibromofluoromethane (Surr)	*102*		*75 - 121*

Lab Sample ID: 240-44046-24 MSD
Matrix: Water
Analysis Batch: 156300

Client Sample ID: W-141104-MLR-24
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloroethane	1.7	U	16.7	14.2		ug/L		85	75 - 120	21	30
1,1-Dichloroethene	1.7	U	16.7	17.2		ug/L		103	74 - 135	12	30
Acetone	17	U	33.4	22.7		ug/L		68	33 - 145	6	30
Benzene	1.7	U	16.7	15.4		ug/L		92	72 - 121	14	30
Carbon tetrachloride	1.7	U	16.7	22.1	F1	ug/L		133	59 - 129	2	30
Chloroform	1.7	U	16.7	16.4		ug/L		98	76 - 120	15	30
cis-1,2-Dichloroethene	1.2	J	16.7	16.4		ug/L		91	70 - 120	13	30
Ethylbenzene	1.7	U	16.7	15.7		ug/L		94	75 - 120	16	30
m-Xylene & p-Xylene	1.7	U	16.7	15.7		ug/L		94	75 - 120	11	30
Methylene Chloride	1.7	U	16.7	15.5		ug/L		93	63 - 128	17	30
o-Xylene	1.7	U	16.7	15.1		ug/L		90	76 - 120	15	30
Tetrachloroethene	1.7	U	16.7	18.6		ug/L		111	70 - 120	3	30
Toluene	1.7	U	16.7	16.0		ug/L		96	78 - 120	12	30
Trichloroethene	46		16.7	61.5		ug/L		96	66 - 120	6	30
Vinyl chloride	1.7	U	16.7	16.3		ug/L		98	49 - 130	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*63 - 129*
4-Bromofluorobenzene (Surr)	*82*		*66 - 120*
Toluene-d8 (Surr)	*92*		*74 - 120*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-44046-24 MSD
Matrix: Water
Analysis Batch: 156300

Client Sample ID: W-141104-MLR-24
Prep Type: Total/NA

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*102*		*75 - 121*

Lab Sample ID: MB 240-156478/5
Matrix: Water
Analysis Batch: 156478

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/14/14 01:59	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/14/14 01:59	1
Acetone	10	U	10	3.4	ug/L			11/14/14 01:59	1
Benzene	1.0	U	1.0	0.24	ug/L			11/14/14 01:59	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/14/14 01:59	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/14/14 01:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 01:59	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/14/14 01:59	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/14/14 01:59	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/14/14 01:59	1
Toluene	1.0	U	1.0	0.22	ug/L			11/14/14 01:59	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/14/14 01:59	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/14/14 01:59	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/14/14 01:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*63 - 129*		*11/14/14 01:59*	*1*
4-Bromofluorobenzene (Surr)	*81*		*66 - 120*		*11/14/14 01:59*	*1*
Toluene-d8 (Surr)	*83*		*74 - 120*		*11/14/14 01:59*	*1*
Dibromofluoromethane (Surr)	*81*		*75 - 121*		*11/14/14 01:59*	*1*

Lab Sample ID: LCS 240-156478/4
Matrix: Water
Analysis Batch: 156478

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	10.0	10.9		ug/L		109	80 - 120
1,1-Dichloroethene	10.0	8.87		ug/L		89	78 - 131
Acetone	20.0	16.1		ug/L		81	43 - 136
Benzene	10.0	9.20		ug/L		92	80 - 120
Carbon tetrachloride	10.0	9.55		ug/L		96	66 - 128
Chloroform	10.0	9.61		ug/L		96	79 - 120
cis-1,2-Dichloroethene	10.0	9.35		ug/L		93	80 - 120
Ethylbenzene	10.0	9.88		ug/L		99	80 - 120
m-Xylene & p-Xylene	10.0	9.76		ug/L		98	80 - 120
Methylene Chloride	10.0	9.24		ug/L		92	66 - 131
o-Xylene	10.0	9.92		ug/L		99	80 - 120
Tetrachloroethene	10.0	10.4		ug/L		104	79 - 120
Toluene	10.0	10.2		ug/L		102	80 - 120
Trichloroethene	10.0	8.97		ug/L		90	76 - 120
Vinyl chloride	10.0	9.54		ug/L		95	53 - 127

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-156478/4
Matrix: Water
Analysis Batch: 156478

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*76*		*63 - 129*
4-Bromofluorobenzene (Surr)	*91*		*66 - 120*
Toluene-d8 (Surr)	*88*		*74 - 120*
Dibromofluoromethane (Surr)	*78*		*75 - 121*

Lab Sample ID: MB 240-156481/6
Matrix: Water
Analysis Batch: 156481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			11/13/14 18:04	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			11/13/14 18:04	1
Acetone	10	U	10	3.4	ug/L			11/13/14 18:04	1
Benzene	1.0	U	1.0	0.24	ug/L			11/13/14 18:04	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			11/13/14 18:04	1
Chloroform	1.0	U	1.0	0.21	ug/L			11/13/14 18:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 18:04	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			11/13/14 18:04	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			11/13/14 18:04	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			11/13/14 18:04	1
Toluene	1.0	U	1.0	0.22	ug/L			11/13/14 18:04	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			11/13/14 18:04	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			11/13/14 18:04	1
Xylenes, Total	1.0	U	1.0	0.43	ug/L			11/13/14 18:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*111*		*63 - 129*		*11/13/14 18:04*	*1*
4-Bromofluorobenzene (Surr)	*91*		*66 - 120*		*11/13/14 18:04*	*1*
Toluene-d8 (Surr)	*95*		*74 - 120*		*11/13/14 18:04*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 121*		*11/13/14 18:04*	*1*

Lab Sample ID: LCS 240-156481/4
Matrix: Water
Analysis Batch: 156481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	10.0	9.54		ug/L		95	80 - 120
1,1-Dichloroethene	10.0	8.92		ug/L		89	78 - 131
Acetone	20.0	19.3		ug/L		97	43 - 136
Benzene	10.0	9.81		ug/L		98	80 - 120
Carbon tetrachloride	10.0	11.3		ug/L		113	66 - 128
Chloroform	10.0	9.44		ug/L		94	79 - 120
cis-1,2-Dichloroethene	10.0	9.44		ug/L		94	80 - 120
Ethylbenzene	10.0	9.17		ug/L		92	80 - 120
m-Xylene & p-Xylene	10.0	9.61		ug/L		96	80 - 120
Methylene Chloride	10.0	8.76		ug/L		88	66 - 131
o-Xylene	10.0	9.62		ug/L		96	80 - 120
Tetrachloroethene	10.0	9.87		ug/L		99	79 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-156481/4
Matrix: Water
Analysis Batch: 156481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	10.0	9.70		ug/L		97	80 - 120
Trichloroethene	10.0	9.71		ug/L		97	76 - 120
Vinyl chloride	10.0	10.4		ug/L		104	53 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*63 - 129*
4-Bromofluorobenzene (Surr)	*89*		*66 - 120*
Toluene-d8 (Surr)	*95*		*74 - 120*
Dibromofluoromethane (Surr)	*93*		*75 - 121*

Lab Sample ID: 240-44046-13 MS
Matrix: Water
Analysis Batch: 156481

Client Sample ID: W-141103-MLR-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	1.0	U	10.0	8.96		ug/L		90	75 - 120
1,1-Dichloroethene	1.0	U	10.0	9.61		ug/L		96	74 - 135
Acetone	10	U	20.0	14.6		ug/L		73	33 - 145
Benzene	1.0	U	10.0	9.60		ug/L		96	72 - 121
Carbon tetrachloride	1.0	U	10.0	12.0		ug/L		120	59 - 129
Chloroform	1.0	U	10.0	9.66		ug/L		97	76 - 120
cis-1,2-Dichloroethene	1.0	U	10.0	9.08		ug/L		91	70 - 120
Ethylbenzene	1.0	U	10.0	9.37		ug/L		94	75 - 120
m-Xylene & p-Xylene	1.0	U	10.0	9.49		ug/L		95	75 - 120
Methylene Chloride	1.0	U	10.0	8.92		ug/L		89	63 - 128
o-Xylene	1.0	U	10.0	9.54		ug/L		95	76 - 120
Tetrachloroethene	1.0	U	10.0	10.3		ug/L		103	70 - 120
Toluene	1.0	U	10.0	9.79		ug/L		98	78 - 120
Trichloroethene	1.0	U	10.0	9.65		ug/L		96	66 - 120
Vinyl chloride	1.0	U	10.0	9.46		ug/L		95	49 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*113*		*63 - 129*
4-Bromofluorobenzene (Surr)	*91*		*66 - 120*
Toluene-d8 (Surr)	*93*		*74 - 120*
Dibromofluoromethane (Surr)	*93*		*75 - 121*

Lab Sample ID: 240-44046-13 MSD
Matrix: Water
Analysis Batch: 156481

Client Sample ID: W-141103-MLR-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloroethane	1.0	U	10.0	9.80		ug/L		98	75 - 120	9	30
1,1-Dichloroethene	1.0	U	10.0	9.83		ug/L		98	74 - 135	2	30
Acetone	10	U	20.0	16.5		ug/L		83	33 - 145	12	30
Benzene	1.0	U	10.0	10.8		ug/L		108	72 - 121	11	30
Carbon tetrachloride	1.0	U	10.0	11.8		ug/L		118	59 - 129	1	30
Chloroform	1.0	U	10.0	10.3		ug/L		103	76 - 120	7	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-44046-13 MSD
Matrix: Water
Analysis Batch: 156481

Client Sample ID: W-141103-MLR-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	1.0	U	10.0	9.89		ug/L		99	70 - 120	9	30
Ethylbenzene	1.0	U	10.0	9.95		ug/L		100	75 - 120	6	30
m-Xylene & p-Xylene	1.0	U	10.0	10.2		ug/L		102	75 - 120	7	30
Methylene Chloride	1.0	U	10.0	9.17		ug/L		92	63 - 128	3	30
o-Xylene	1.0	U	10.0	9.69		ug/L		97	76 - 120	2	30
Tetrachloroethene	1.0	U	10.0	10.5		ug/L		105	70 - 120	3	30
Toluene	1.0	U	10.0	10.4		ug/L		104	78 - 120	6	30
Trichloroethene	1.0	U	10.0	10.4		ug/L		104	66 - 120	8	30
Vinyl chloride	1.0	U	10.0	9.60		ug/L		96	49 - 130	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*63 - 129*
4-Bromofluorobenzene (Surr)	*87*		*66 - 120*
Toluene-d8 (Surr)	*94*		*74 - 120*
Dibromofluoromethane (Surr)	*99*		*75 - 121*

GC/MS VOA

Analysis Batch: 156293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-44046-3	W-141103-MLR-03	Total/NA	Water	8260B	
240-44046-4	W-141103-MLR-04	Total/NA	Water	8260B	
240-44046-5	W-141103-MLR-05	Total/NA	Water	8260B	
240-44046-11	W-141103-MLR-11	Total/NA	Water	8260B	
240-44046-12	W-141103-MLR-12	Total/NA	Water	8260B	
240-44046-22	W-141103-MLR-22	Total/NA	Water	8260B	
LCS 240-156293/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-156293/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 156300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-44046-1	W-141103-MLR-01	Total/NA	Water	8260B	
240-44046-2	W-141103-MLR-02	Total/NA	Water	8260B	
240-44046-6	W-141103-MLR-06	Total/NA	Water	8260B	
240-44046-7	W-141103-MLR-07	Total/NA	Water	8260B	
240-44046-8	W-141103-MLR-08	Total/NA	Water	8260B	
240-44046-9	W-141103-MLR-09	Total/NA	Water	8260B	
240-44046-10	W-141103-MLR-10	Total/NA	Water	8260B	
240-44046-14	W-141103-MLR-14	Total/NA	Water	8260B	
240-44046-15	W-141103-MLR-15	Total/NA	Water	8260B	
240-44046-16	W-141103-MLR-16	Total/NA	Water	8260B	
240-44046-17	W-141103-MLR-17	Total/NA	Water	8260B	
240-44046-18	W-141103-MLR-18	Total/NA	Water	8260B	
240-44046-19	W-141103-MLR-19	Total/NA	Water	8260B	
240-44046-20	W-141103-MLR-20	Total/NA	Water	8260B	
240-44046-21	W-141103-MLR-21	Total/NA	Water	8260B	
240-44046-23	W-141104-MLR-23	Total/NA	Water	8260B	
240-44046-24	W-141104-MLR-24	Total/NA	Water	8260B	
240-44046-24 MS	W-141104-MLR-24	Total/NA	Water	8260B	
240-44046-24 MSD	W-141104-MLR-24	Total/NA	Water	8260B	
240-44046-25	W-141104-MLR-25	Total/NA	Water	8260B	
240-44046-26	W-141104-MLR-26	Total/NA	Water	8260B	
LCS 240-156300/3	Lab Control Sample	Total/NA	Water	8260B	
MB 240-156300/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 156478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-44046-27	W-141104-MLR-27	Total/NA	Water	8260B	
240-44046-28	W-141104-MLR-28	Total/NA	Water	8260B	
240-44046-29	W-141104-MLR-29	Total/NA	Water	8260B	
240-44046-30	W-141104-MLR-30	Total/NA	Water	8260B	
240-44046-31	W-141104-MLR-31	Total/NA	Water	8260B	
240-44046-32	W-141104-MLR-32	Total/NA	Water	8260B	
240-44046-33	W-141104-MLR-33	Total/NA	Water	8260B	
240-44046-34	TRIP BLANK	Total/NA	Water	8260B	
LCS 240-156478/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-156478/5	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 156481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-44046-13	W-141103-MLR-13	Total/NA	Water	8260B	

GC/MS VOA (Continued)

Analysis Batch: 156481 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-44046-13 MS	W-141103-MLR-13	Total/NA	Water	8260B	
240-44046-13 MSD	W-141103-MLR-13	Total/NA	Water	8260B	
LCS 240-156481/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-156481/6	Method Blank	Total/NA	Water	8260B	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-01
Lab Sample ID: 240-44046-1
Date Collected: 11/03/14 12:57
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 02:35	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-02
Lab Sample ID: 240-44046-2
Date Collected: 11/03/14 13:25
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 02:57	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-03
Lab Sample ID: 240-44046-3
Date Collected: 11/03/14 13:55
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	156293	11/12/14 22:06	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-04
Lab Sample ID: 240-44046-4
Date Collected: 11/03/14 13:55
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	156293	11/12/14 22:29	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-05
Lab Sample ID: 240-44046-5
Date Collected: 11/03/14 14:20
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		3.33	156293	11/12/14 22:51	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-06
Lab Sample ID: 240-44046-6
Date Collected: 11/03/14 14:45
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 03:20	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-07 — **Lab Sample ID: 240-44046-7**
Date Collected: 11/03/14 14:40 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 03:42	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-08 — **Lab Sample ID: 240-44046-8**
Date Collected: 11/03/14 15:05 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 04:05	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-09 — **Lab Sample ID: 240-44046-9**
Date Collected: 11/03/14 15:25 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 04:27	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-10 — **Lab Sample ID: 240-44046-10**
Date Collected: 11/03/14 15:45 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 04:49	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-11 — **Lab Sample ID: 240-44046-11**
Date Collected: 11/03/14 16:40 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	156293	11/12/14 23:14	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-12 — **Lab Sample ID: 240-44046-12**
Date Collected: 11/03/14 16:40 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		33.33	156293	11/12/14 23:36	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-13 — **Lab Sample ID: 240-44046-13**
Date Collected: 11/03/14 14:57 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156481	11/13/14 18:27	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-14 — **Lab Sample ID: 240-44046-14**
Date Collected: 11/03/14 15:20 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 05:12	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-15 — **Lab Sample ID: 240-44046-15**
Date Collected: 11/03/14 15:35 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 05:34	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-16 — **Lab Sample ID: 240-44046-16**
Date Collected: 11/03/14 13:55 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 05:57	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-17 — **Lab Sample ID: 240-44046-17**
Date Collected: 11/03/14 16:14 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 06:19	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-18 — **Lab Sample ID: 240-44046-18**
Date Collected: 11/03/14 16:12 — **Matrix: Water**
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 06:41	RJQ	TAL CAN

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141103-MLR-19

Lab Sample ID: 240-44046-19

Date Collected: 11/03/14 16:40
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 07:04	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-20

Lab Sample ID: 240-44046-20

Date Collected: 11/03/14 17:05
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 07:26	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-21

Lab Sample ID: 240-44046-21

Date Collected: 11/03/14 17:12
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 07:48	RJQ	TAL CAN

Client Sample ID: W-141103-MLR-22

Lab Sample ID: 240-44046-22

Date Collected: 11/03/14 17:13
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		4	156293	11/12/14 21:43	RJQ	TAL CAN

Client Sample ID: W-141104-MLR-23

Lab Sample ID: 240-44046-23

Date Collected: 11/04/14 09:24
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 08:11	RJQ	TAL CAN

Client Sample ID: W-141104-MLR-24

Lab Sample ID: 240-44046-24

Date Collected: 11/04/14 10:30
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1.67	156300	11/13/14 10:02	RJQ	TAL CAN

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-25

Lab Sample ID: 240-44046-25

Date Collected: 11/04/14 11:25
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 08:55	RJQ	TAL CAN

Client Sample ID: W-141104-MLR-26

Lab Sample ID: 240-44046-26

Date Collected: 11/04/14 12:25
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156300	11/13/14 09:17	RJQ	TAL CAN

Client Sample ID: W-141104-MLR-27

Lab Sample ID: 240-44046-27

Date Collected: 11/04/14 12:58
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156478	11/14/14 02:21	LEE	TAL CAN

Client Sample ID: W-141104-MLR-28

Lab Sample ID: 240-44046-28

Date Collected: 11/04/14 12:58
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156478	11/14/14 02:44	LEE	TAL CAN

Client Sample ID: W-141104-MLR-29

Lab Sample ID: 240-44046-29

Date Collected: 11/04/14 14:25
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156478	11/14/14 03:06	LEE	TAL CAN

Client Sample ID: W-141104-MLR-30

Lab Sample ID: 240-44046-30

Date Collected: 11/04/14 14:45
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156478	11/14/14 03:28	LEE	TAL CAN

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Client Sample ID: W-141104-MLR-31

Lab Sample ID: 240-44046-31

Date Collected: 11/04/14 15:05
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156478	11/14/14 03:51	LEE	TAL CAN

Client Sample ID: W-141104-MLR-32

Lab Sample ID: 240-44046-32

Date Collected: 11/04/14 14:56
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156478	11/14/14 04:13	LEE	TAL CAN

Client Sample ID: W-141104-MLR-33

Lab Sample ID: 240-44046-33

Date Collected: 11/04/14 15:40
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156478	11/14/14 04:35	LEE	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-44046-34

Date Collected: 11/04/14 00:00
Matrix: Water
Date Received: 11/06/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	156478	11/14/14 04:57	LEE	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-44046-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-15
Connecticut	State Program	1	PH-0590	12-31-14
Florida	NELAP	4	E87225	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200004	07-31-15
Kansas	NELAP	7	E-10336	01-31-15
Kentucky (UST)	State Program	4	58	06-30-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-14
Nevada	State Program	9	OH-000482008A	07-31-15
New Jersey	NELAP	2	OH001	06-30-15
New York	NELAP	2	10975	03-31-15
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-15
Texas	NELAP	6		08-31-15
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-15
Washington	State Program	10	C971	01-12-15
West Virginia DEP	State Program	3	210	12-31-14
Wisconsin	State Program	5	999518190	08-31-15

* Certification renewal pending - certification considered valid.

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: SP-01441
PAGE 1 OF 3
(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 023974	**Laboratory Name:** TEST AMERICA	**Lab Location:** NORTH CANTON, OH	**SSOW ID:**
Project Name: WAVERLY WATER SUPPLY NPL SITE	**Lab Contact:**	**Lab Quote No:**	**Cooler No:**
Project Location: WAVERLY, NY			**Carrier:** FED EX
Chemistry Contact: CHRIS ANDERSON			**Airbill No:**
Sampler(s): M. ARCHER, JR BARNES			**Date Shipped:** 11/5/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	VOCs (624.1)	MS/MSD Request	Comments/ Special Instructions:
1	W-141103-MLR-01	11/3/14	12:57	WG	G		3							3	X		
2	W-141103-MLR-02	11/3/14	13:25	WG	G		3							3	X		
3	W-141103-MLR-03	11/3/14	13:55	WG	G		3							3	X		
4	W-141103-MLR-04	11/3/14	13:55	WG	G		3							3	X		
5	W-141103-MLR-05	11/3/14	14:20	WG	G		3							3	X		
6	W-141103-MLR-06	11/3/14	14:45	WG	G		3							3	X		
7	W-141103-MLR-07	11/3/14	14:50	WG	G		3							3	X		
8	W-141103-MLR-08	11/3/14	15:05	WG	G		3							3	X		
9	W-141103-MLR-09	11/3/14	15:25	WG	G		3							3	X		
10	W-141103-MLR-10	11/3/14	15:45	WG	G		2							2	X		
11	W-141103-MLR-11	11/3/14	16:40	WG	G		2							2	X		
12	W-141103-MLR-12	11/3/14	16:40	WG	G		3							3	X		
13	W-141103-MLR-13	11/3/14	14:57	WG	G		9							9	X		MS/MSD
14	W-141103-MLR-14	11/3/14	15:20	WG	G		3							3	X		
15	W-141103-MLR-15	11/3/14	15:35	WG	G		3							3	X		

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other: STANDARD

Total Number of Containers: 111

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1. Michael J. Richard	CRA	11/5/14	16:00	1.			
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

CHAIN OF CUSTODY RECORD

COC NO.: SP-01439
PAGE 2 OF 3
(See Reverse Side for Instructions)

CONESTOGA-ROVERS & ASSOCIATES
1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

Project No/ Phase/Task Code: 0239746	Laboratory Name: TEST AMERICA
Project Name: WAUSAU WATER SUPPLY NPL SITE	Lab Contact:
Project Location: WAUSAU WISCONSIN	Lab Location: NORTH CANTON, OH
Chemistry Contact: GRANT ANDERSON	Lab Quote No:
Sampler(s): M. RITCHIE, M. BARNES, R. AAMOT	SSOW ID:
	Cooler No:
	Carrier: FED EX
	Airbill No:
	Date Shipped: 11/5/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp. (C)	Container Quantity & Preservation: Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Analysis Requested: VOCs (8260B)	MS/MSD Request	Comments/ Special Instructions:
1	W-141103-MLR-16	11/3/14	13:55	WG	G		3							3	X		
2	W-141103-MLR-17	11/3/14	16:14	WG	G		3							3	X		
3	W-141103-MLR-18	11/3/14	16:12	WG	G		3							3	X		
4	W-141103-MLR-19	11/3/14	16:40	WG	G		3							3	X		
5	W-141103-MLR-20	11/3/14	17:25	WG	G		3							3	X		
6	W-141103-MLR-21	11/3/14	17:12	WG	G		3							3	X		
7	W-141103-MLR-22	11/3/14	17:13	WG	G		3							3	X		
8	W-141104-MLR-23	11/4/14	9:24	WG	G		3							3	X		
9	W-141104-MLR-24	11/4/14	10:30	WG	G		3							3	X		MS/MSD
10	W-141104-MLR-25	11/4/14	11:25	WG	G		3							3	X		
11	W-141104-MLR-26	11/4/14	12:25	WG	G		2							2	X		
12	W-141104-MLR-27	11/4/14	12:56	WG	G		3							3	X		
13	W-141104-MLR-28	11/4/14	12:58	WG	G		3							3	X		
14	W-141104-MLR-29	11/4/14	14:25	WG	G		3							3	X		
15	W-141104-MLR-30	11/4/14	14:45	WG	G		3							3	X		

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other: STANDARD

Total Number of Containers: 111
All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1. Michael Ritchie	CRA	11/5/14	16:00	1.			
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

CHAIN OF CUSTODY RECORD

COC NO.: SP-01440

PAGE 3 OF 3

(See Reverse Side for Instructions)

CONESTOGA-ROVERS & ASSOCIATES

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

Project No/ Phase/Task Code: 023974	**Laboratory Name:** TEST AMERICA	**Lab Location:** NORTH CANTON, OH	**SSOW ID:**
Project Name: WAUSAU WATER SUPPLY NPL SITE	**Lab Contact:**	**Lab Quote No:**	**Cooler No:**
Project Location: WAUSAU, WI			**Carrier:** FEDEX
Chemistry Contact: C. RAMSDEN			**Airbill No:**
Sampler(s): M. RIZZO, B. BARNES, R. RAMSDEN			**Date Shipped:** 11/5/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Sample Type: Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved	HCl	HNO_3	H_2SO_4	NaOH	MeOH/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	VOCs (8260B)	MS/MSD Request	Comments/ Special Instructions:
1	W-141124-MLR-31	11/4/14	15:05	WG	G		3							3	X		
2	W-141124-MLR-32	11/4/14	14:30	WG	G		3							3	X		
3	W-141124-MLR-33	11/4/14	15:40	WG	G		3							3	X		
4	TRIP BLANK	11/4/14	—	TB	G		2							3	X		
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

TAT Required in business days (use separata COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other: STANDARD

Total Number of Containers: 111

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1. Michael Zbikie	CRA	11/5/14	16:00	1.			
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS


240-44046 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

CHAIN OF CUSTODY RECORD

COC NO.: SP- 01441
PAGE 1 OF 3
(See Reverse Side for Instructions)

CONESTOGA-ROVERS & ASSOCIATES
1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

1.8 → 2.2

Project No/ Phase/Task Code: 0039748	Laboratory Name: TEST AMERICA	Lab Location: NORTH CANTON, OH	SSOW ID:
Project Name: WAUSAU WATER SUPPLY NPL SITE	Lab Contact:	Lab Quote No:	Cooler No:
Project Location: WAUSAU, WI			Carrier: FED EX
Chemistry Contact: GRANT ANDERSON			Airbill No:
Sampler(s): M. RICHIE, M. BARNES			Date Shipped: 11/5/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Analysis Requested: VOCs (8260B)	MS/MSD Request	Comments/ Special Instructions:
1	W-141103-MLR-01	11/3/14	12:57	WG	G		3							3	X		
2	W-141103-MLR-02	11/3/14	13:25	WG	G		3							3	X		
3	W-141103-MLR-03	11/3/14	13:55	WG	G		3							3	X		
4	W-141103-MLR-04	11/3/14	13:55	WG	G		3							3	X		
5	W-141103-MLR-05	11/3/14	14:20	WG	G		3							3	X		
6	W-141103-MLR-06	11/3/14	14:45	WG	G		3							3	X		
7	W-141103-MLR-07	11/3/14	14:50	WG	G		3							3	X		
8	W-141103-MLR-08	11/3/14	15:05	WG	G		3							3	X		
9	W-141103-MLR-09	11/3/14	15:25	WG	G		3							3	X		
10	W-141103-MLR-10	11/3/14	15:45	WG	G		2							2	X		
11	W-141103-MLR-11	11/3/14	16:40	WG	G		2							2	X		
12	W-141103-MLR-12	11/3/14	16:40	WG	G		3							3	X		
13	W-141103-MLR-13	11/3/14	14:57	WG	G		9							9	X		MS/MSD
14	W-141103-MLR-14	11/3/14	15:20	WG	G		3							3	X		
15	W-141103-MLR-15	11/3/14	15:35	WG	G		3							3	X		

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other: STANDARD

Total Number of Containers: 111

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.				1.	TA	11-6-14	925
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew CRA Form: COC-10A (20110804)

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO. SP-014 -2-
PAGE 2 OF 3
(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 003975	Laboratory Name: TEST AMERICA	Lab Location: NORTH CANTON, OH	SSOW ID:
Project Name: WAUSAU WATER SUPPLY NPL SITE	Lab Contact:	Lab Quote No:	Cooler No:
Project Location: WAUSAU, WISCONSIN			Carrier: FED EX
Chemistry Contact: GRANT ANDERSON			Airbill No:
Sampler(s): M. RICHIE, M. BARNES, R. AAMOT			Date Shipped: 11/5/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Analysis Requested: VOCs (8260B)	MS/MSD Request	Comments/ Special Instructions:
1	W-141103-MLR-16	11/3/14	13:55	WG	G		3							3	X		
2	W-141103-MLR-17	11/3/14	16:14	WG	G		3							3	X		
3	W-141103-MLR-18	11/3/14	16:12	WG	G		3							3	X		
4	W-141103-MLR-19	11/3/14	16:40	WG	G		3							3	X		
5	W-141103-MLR-20	11/3/14	17:05	WG	G		3							3	X		
6	W-141103-MLR-21	11/3/14	17:12	WG	G		3							3	X		
7	W-141103-MLR-22	11/3/14	17:13	WG	G		3							3	X		
8	W-141104-MLR-23	11/4/14	9:24	WG	G		3							3	X		
9	W-141104-MLR-24	11/4/14	10:30	WG	G		9							9	X		MS/MSD
10	W-141104-MLR-25	11/4/14	11:25	WG	G		3							3	X		
11	W-141104-MLR-26	11/4/14	12:25	WG	G		2							2	X		
12	W-141104-MLR-27	11/4/14	12:55	WG	G		3							3	X		
13	W-141104-MLR-28	11/4/14	12:55	WG	G		3							3	X		
14	W-141104-MLR-29	11/4/14	14:25	WG	G		3							3	X		
15	W-141104-MLR-30	11/4/14	14:45	WG	G		3							3	X		

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ~~☒~~ 2 Week ☐ Other: STANDARD

Total Number of Containers: 111

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.				1.	TA	11-6-14	925
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

Page 69 of 71

11/14/2014

CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: SP- 01440
PAGE 3 OF 3
(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 003976	Laboratory Name: TEST AMERICA	Lab Location: NORTH CANTON, OH	SSOW ID:
Project Name: WAUSAU WATER SUPPLY NPL SITE	Lab Contact:	Lab Quote No:	Cooler No:
Project Location: WAUSAU, WI			Carrier: FEDEX
Chemistry Contact: GRANT ANDERSON			Airbill No:
Sampler(s): M. RICHIE, M. BARNES, R. AAMOT			Date Shipped: 11/5/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Analysis Requested (See Back of COC for Definitions): VOCs (8260B)	MS/MSD Request	Comments/ Special Instructions:
1	W-141104-MLR-31	11/4/14	15:05	WG	G		3							3	X		
2	W-141104-MLR-32	11/4/14	14:35	WG	G		3							3	X		
3	W-141104-MLR-33	11/4/14	15:40	WG	G		3							3	X		
4	TRIP BLANK	11/4/14	—	TB	G		3							3	X		
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other: STANDARD

Total Number of Containers: 111

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.				1.	TA	11-6-14	925
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 440496

Client CRA Site Name

Cooler Received on 11.6.14 Opened on 11.6.14

Cooler unpacked by:

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A	(CF +2 °C)	Observed Cooler Temp. °C	Corrected Cooler Temp. °C	☐ See Multiple Cooler Form
IR GUN# 4	(CF -2 °C)	Observed Cooler Temp. °C	Corrected Cooler Temp. °C	
IR GUN# 5	(CF +0.4 °C)	Observed Cooler Temp. 1.8 °C	Corrected Cooler Temp. 2.2 °C	
IR GUN# 8	(CF 0 °C)	Observed Cooler Temp. °C	Corrected Cooler Temp. °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC412469
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM Date by via Verbal Voice Mail Other
Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

Appendix B

Wausau Chemical Pavement Inspection Report

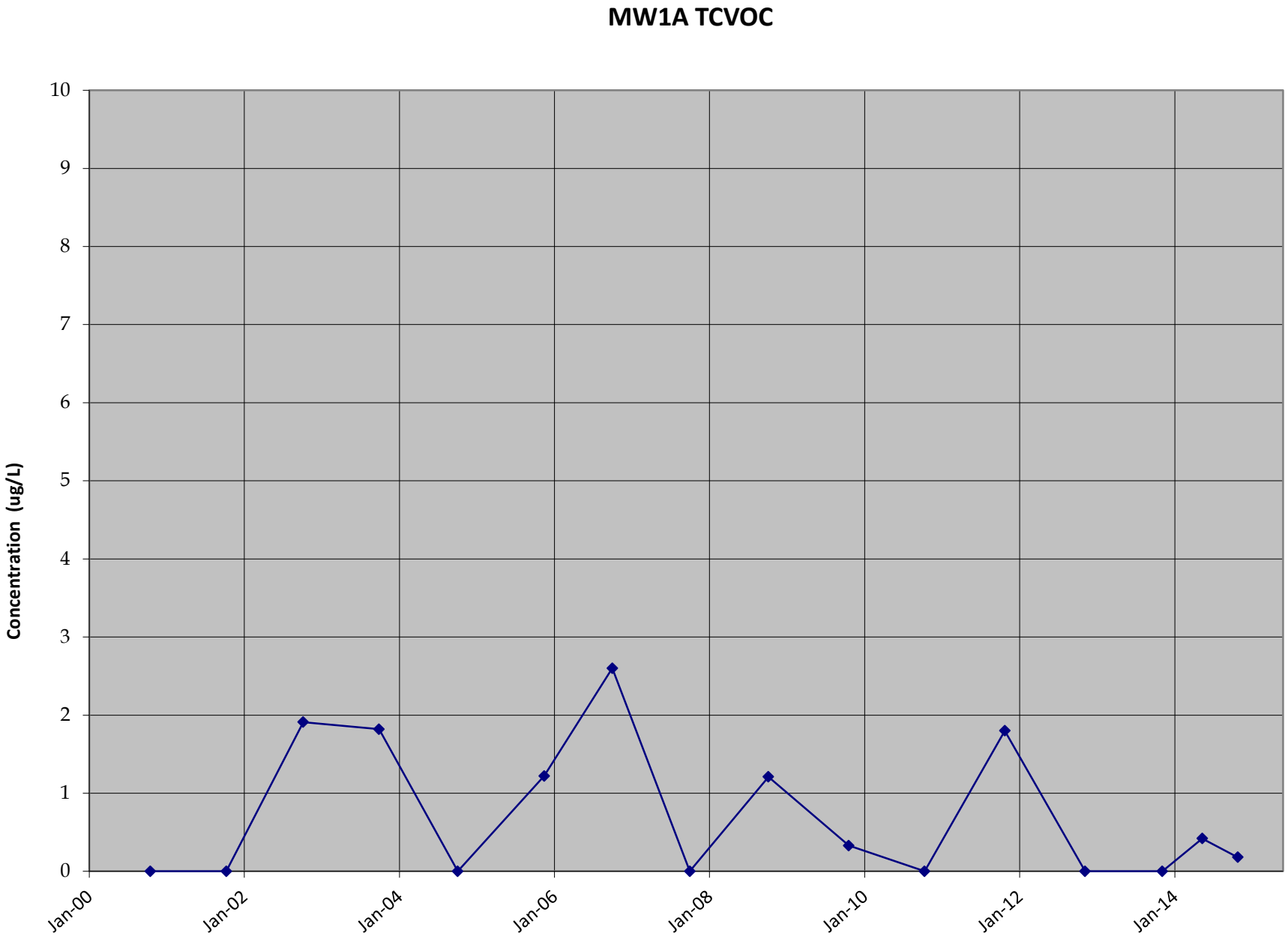
APPENDIX B - TABLE 1

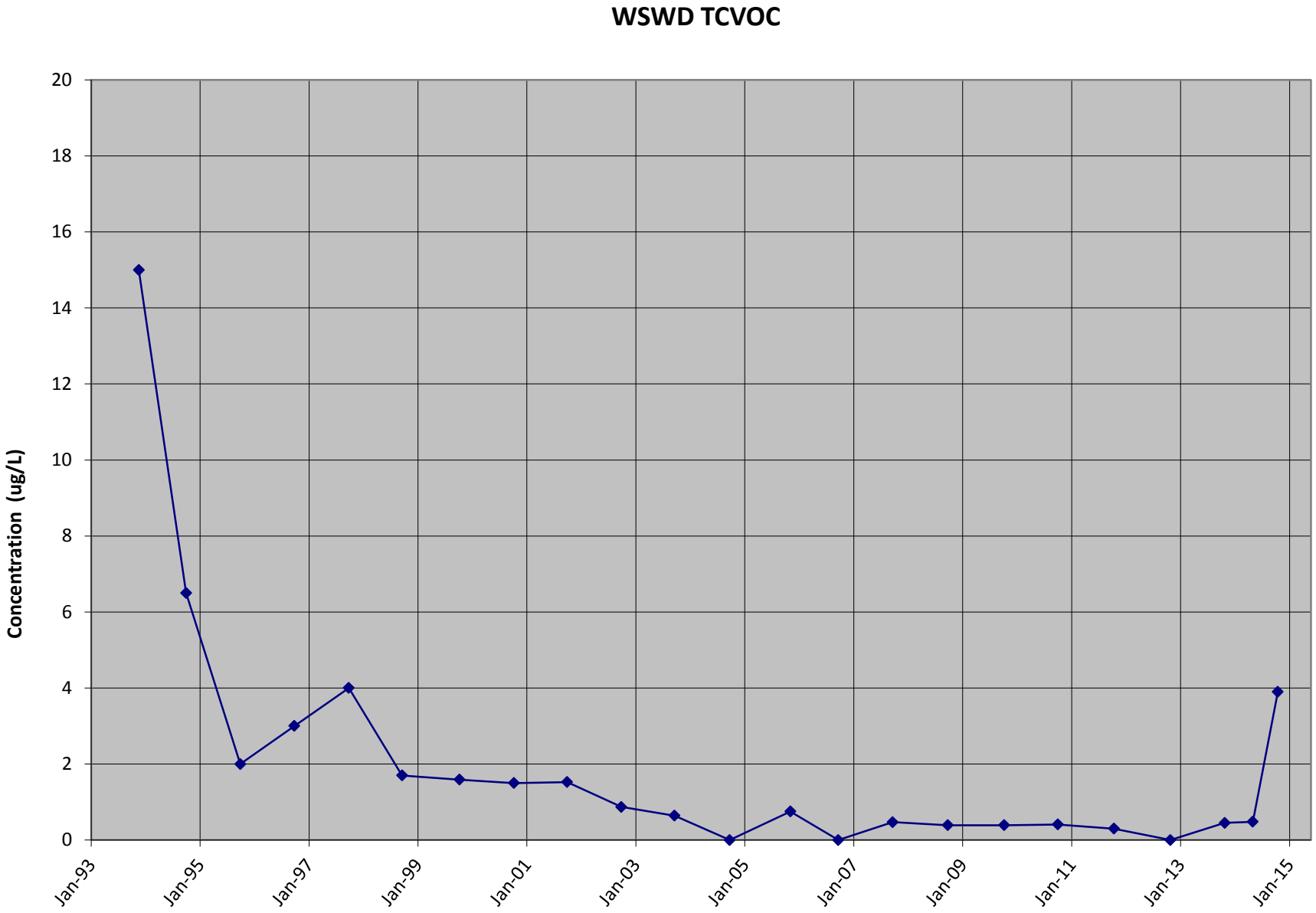
PAVEMENT BARRIER INSPECTION LOG
WAUSAU CHEMCIAL CORP.

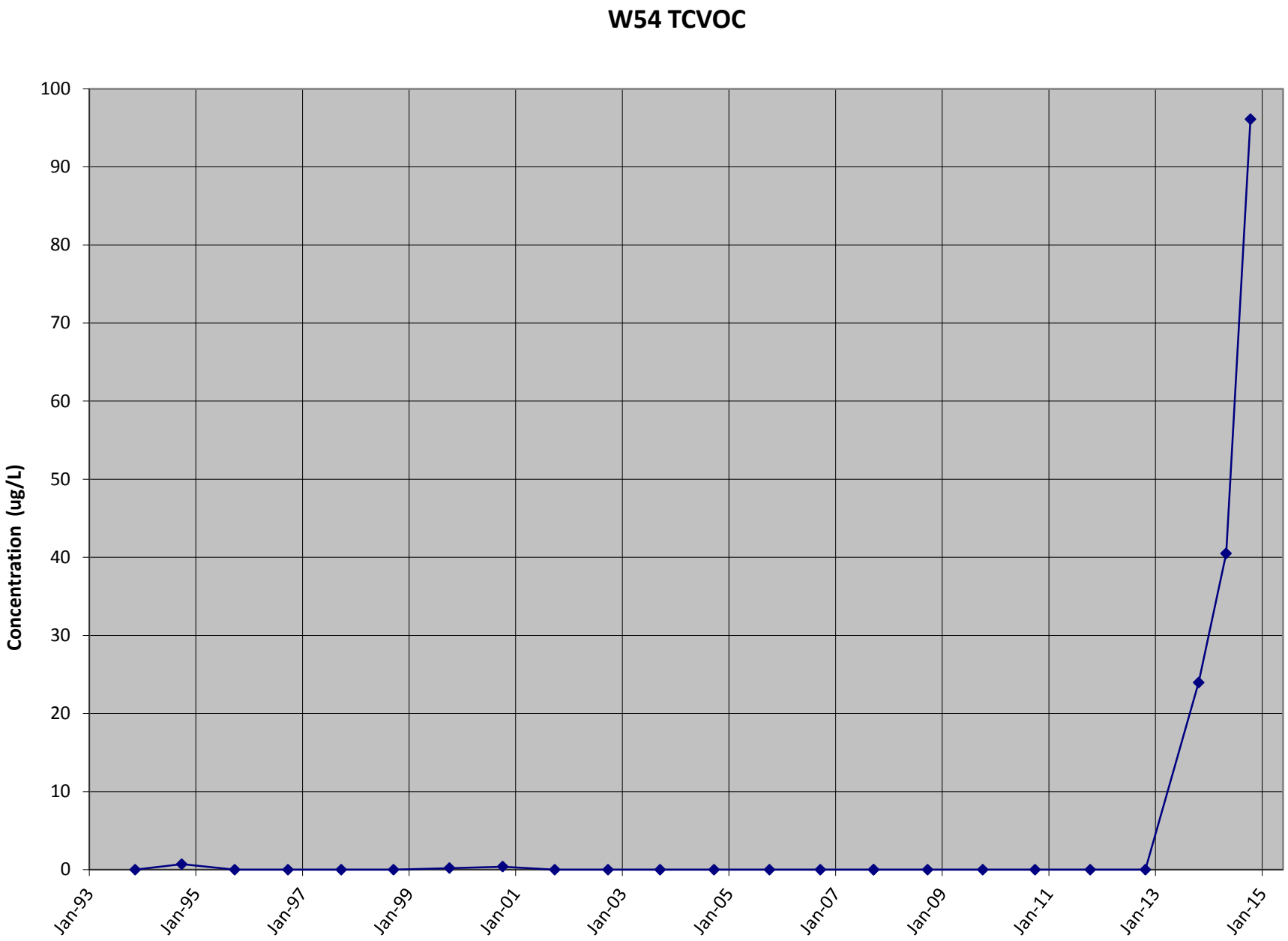
Inspection Date	***Inspector***	***Condition of Cap***	***Recommendations***	***Have Recommendations From Previous Inspection Been Implemented?***
8/29/2011	Rob Flashinski	Pavement was completely replaced in 2009. Three cracks starting to form, but have not penatrated.	No action required.	Yes.
7/2/2012	Rob Flashinski	Overall condition is very good. Recent work by the gas company has been patched thoroughly. All existing cracks have been filled.	None.	None Existed.
5/21/2013	Rob Flashinski	No change in appearance.	None.	Yes.
11/6/2013	Rob Flashinski	Overall condition is still good. Some hairline type cracks starting to form on the ends of previously filled cracks and near gas company asphalt work.	Nothing at this point. The hariline cracks will likely need attention in the spring.	Yes.
11/7/2014	Rob Flashinski	Overall condition is still good. Some hairline type cracks still exist on the ends of previously filled cracks and asphalt work by gas meter is startin g to show agate, but no cracks have formed.	Nothing at this point. Expect that some tar caulking will be needed in the spring.	Yes.

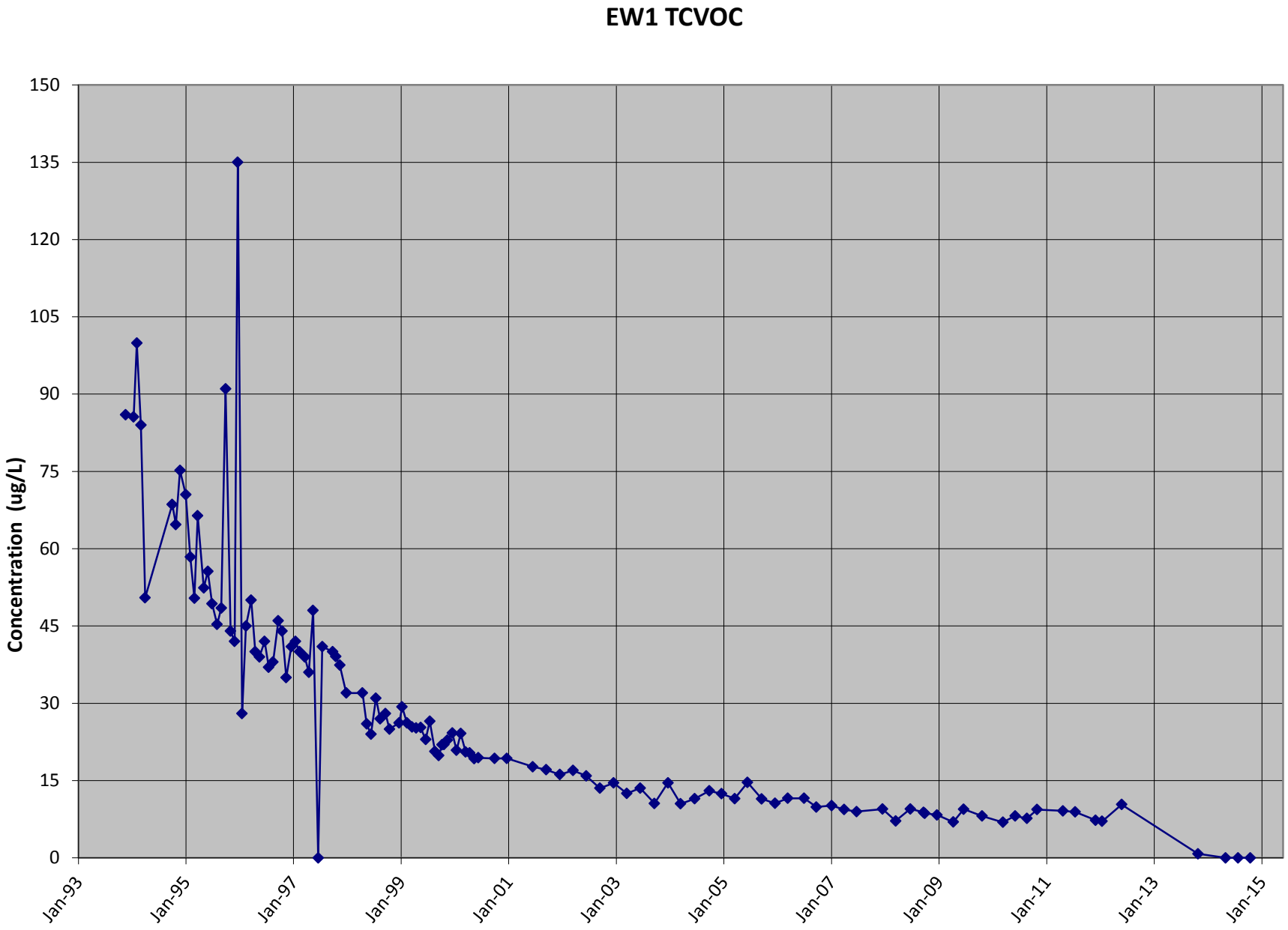
Appendix C

Total Chlorinated VOC Concentration Charts

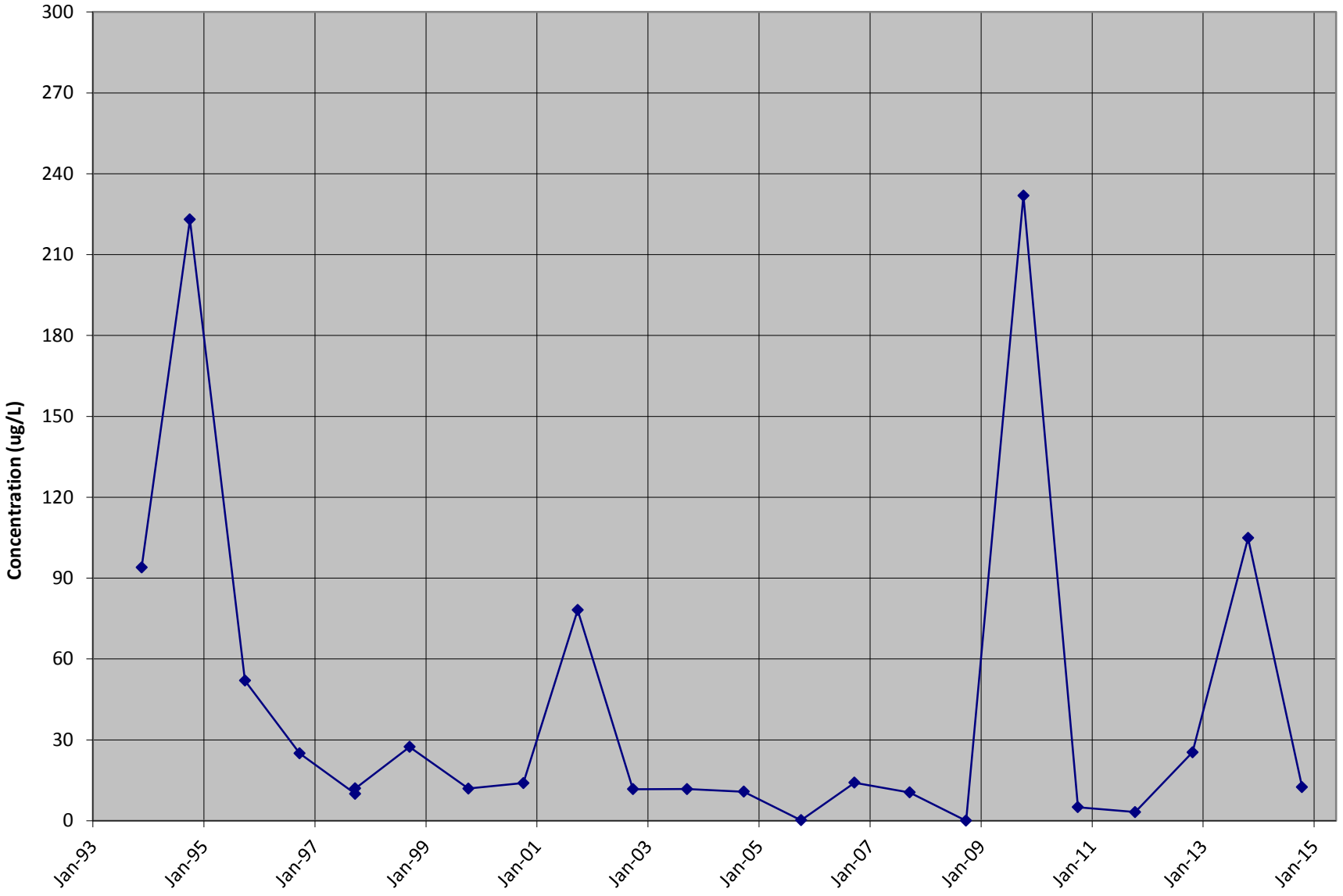

MW1A TCVOC
Concentration (ug/L)
10
9
8
7
6
5
4
3
2
1
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14

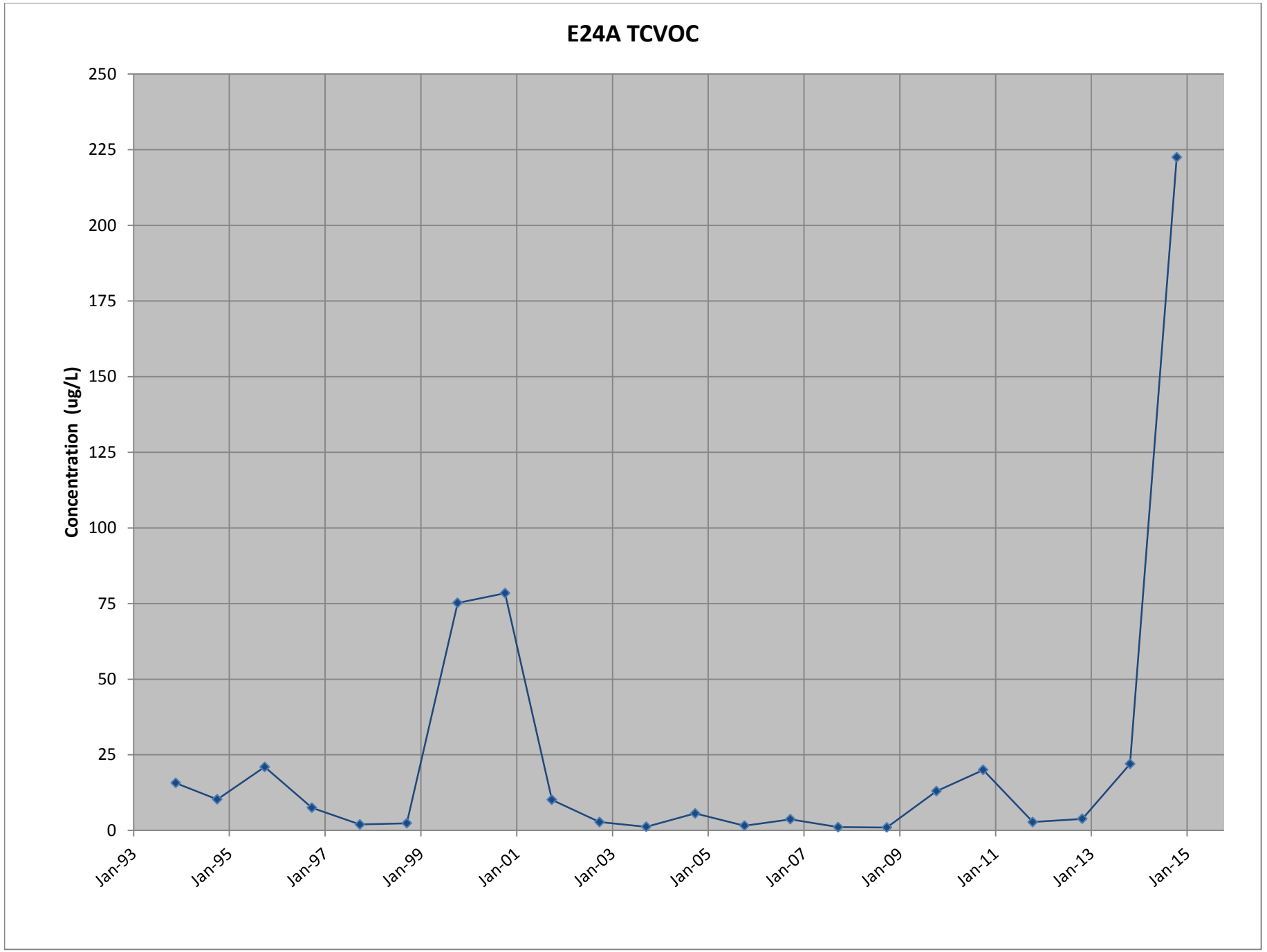

WSWD TCVOC
Concentration (ug/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15


W54 TCVOC
Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

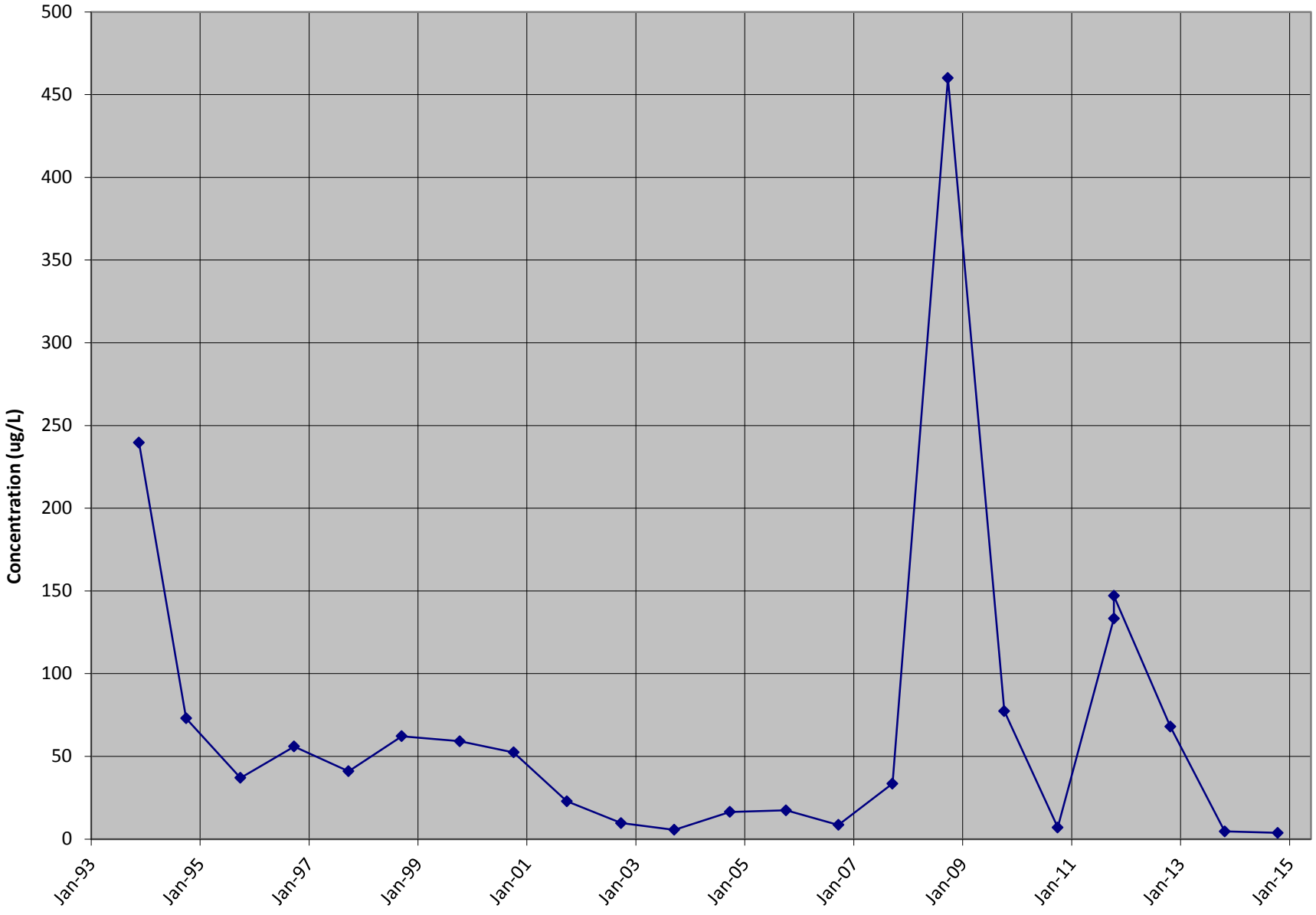

EW1 TCVOC
Concentration (ug/L)
150
135
120
105
90
75
60
45
30
15
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

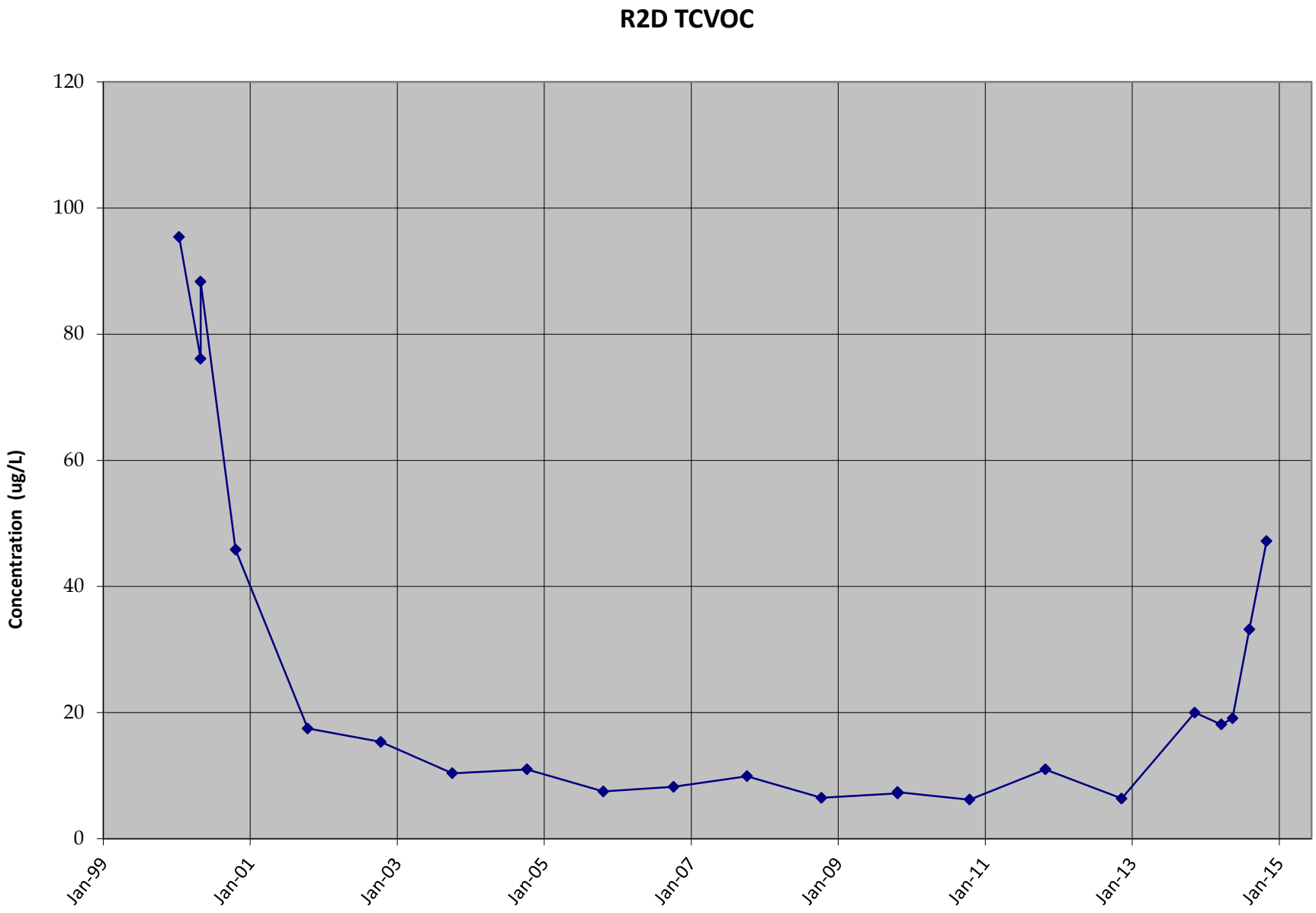
E22A TCVOC

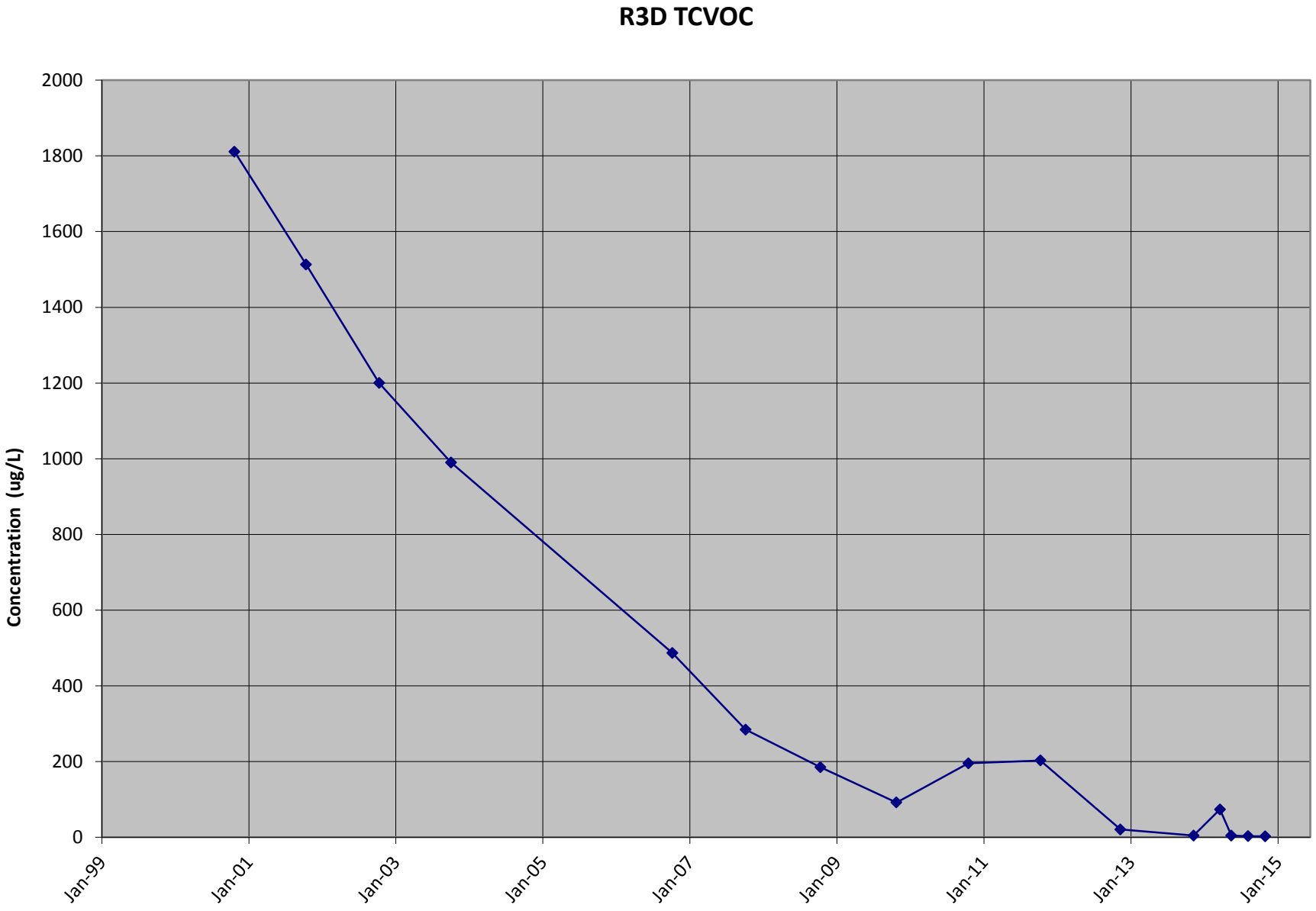

Concentration (ug/L)
300
270
240
210
180
150
120
90
60
30
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

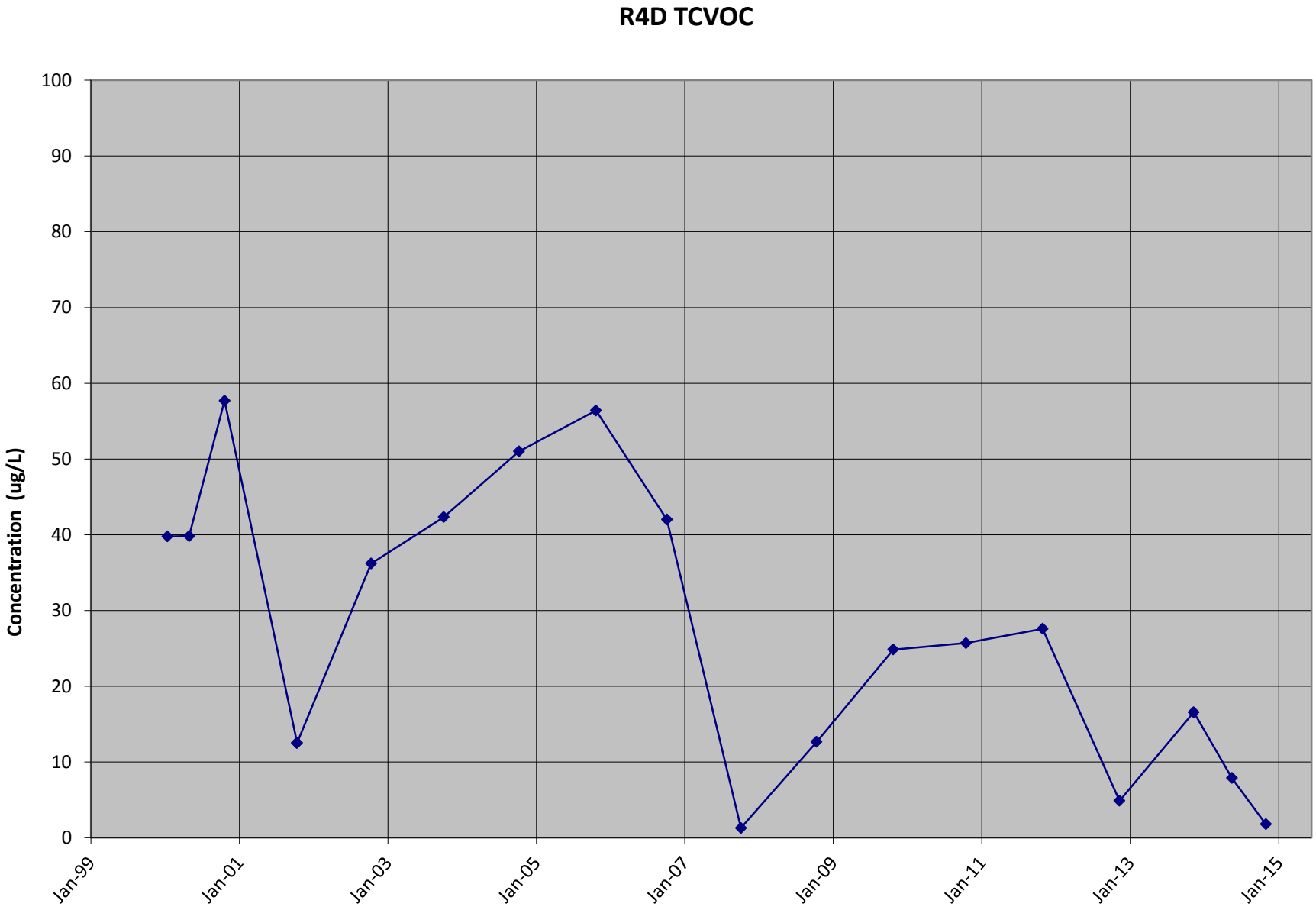

E24A TCVOC
Concentration (ug/L)
250
225
200
175
150
125
100
75
50
25
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

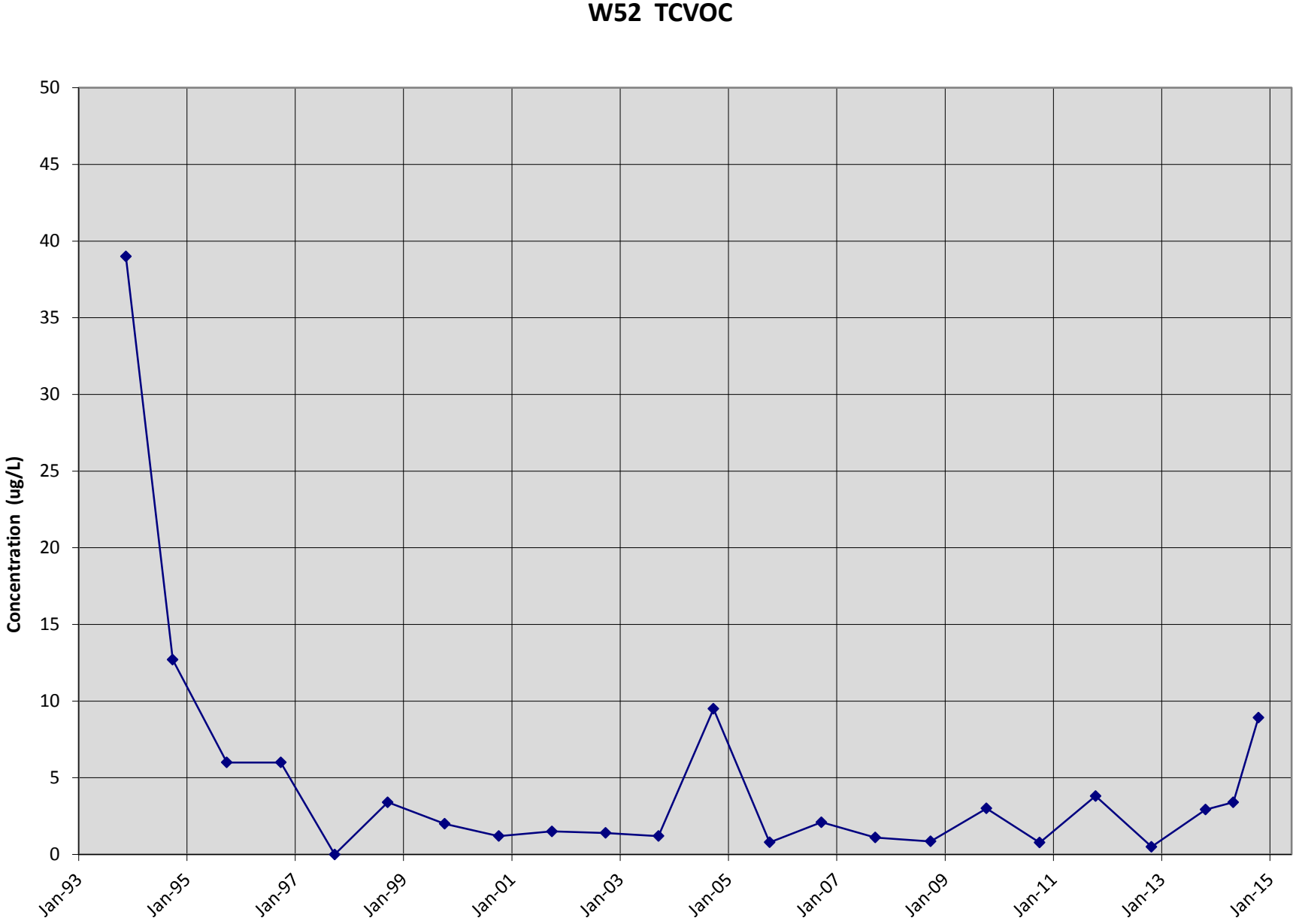
E37A TCVOC

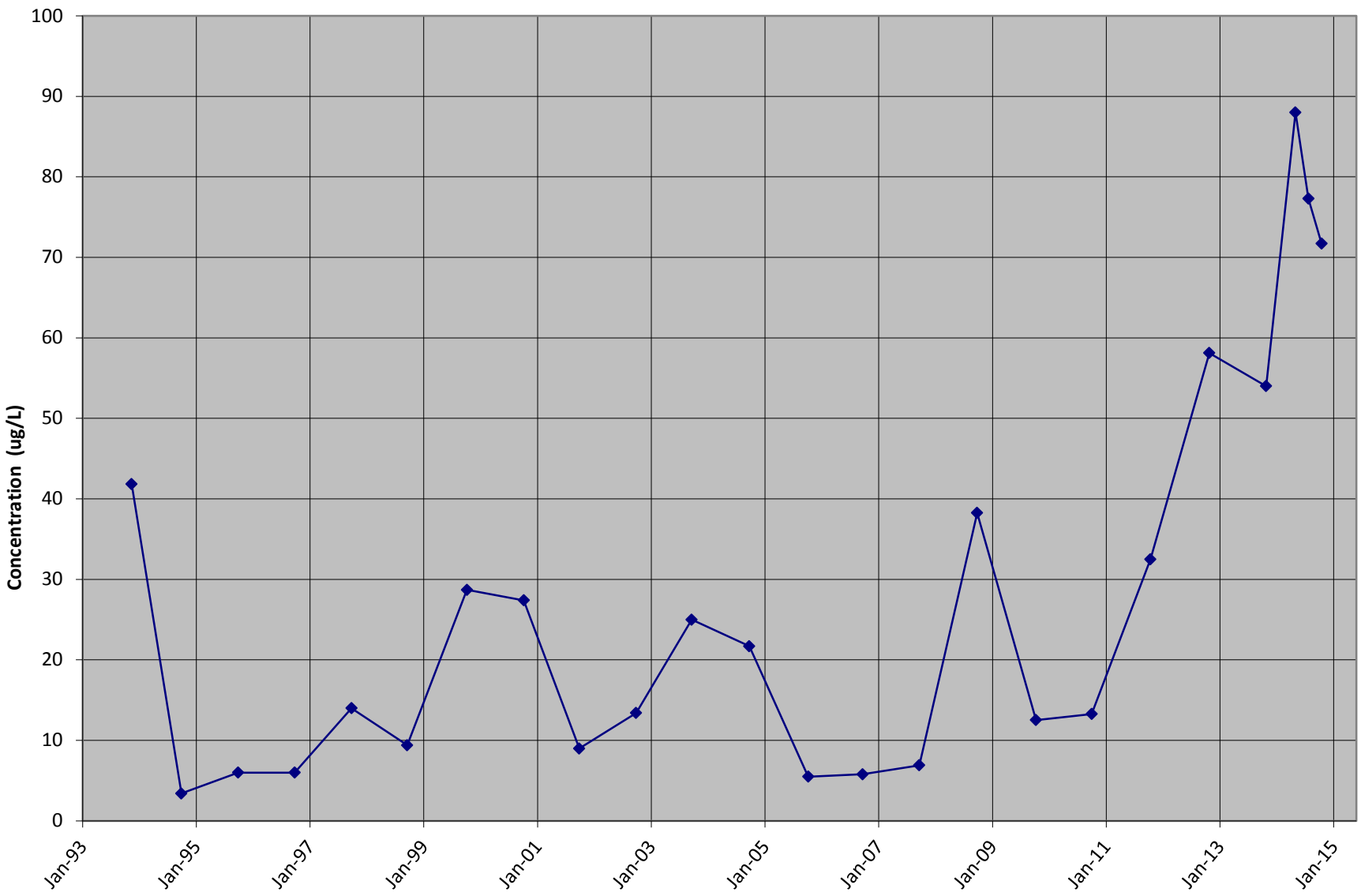

Concentration (ug/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

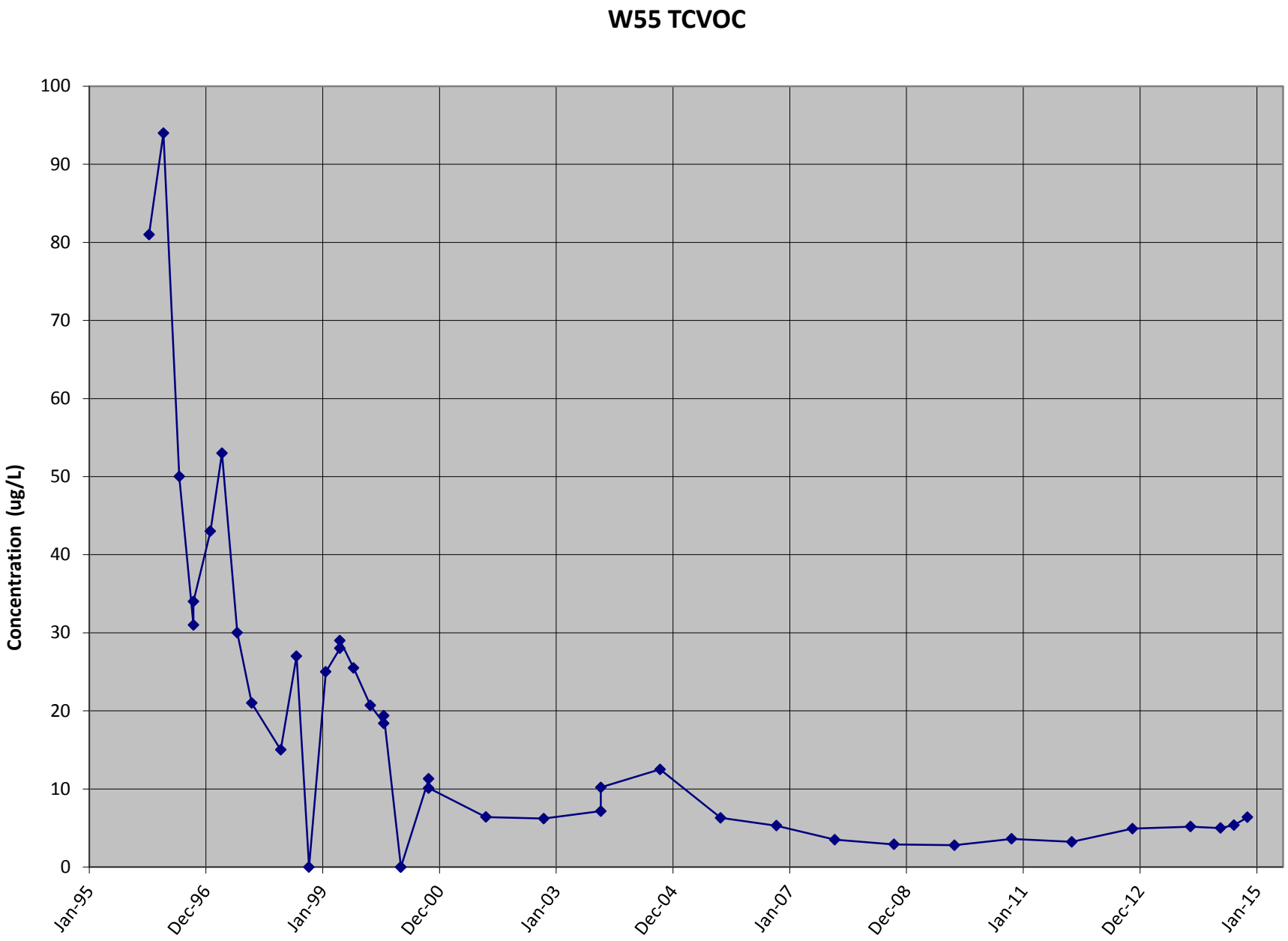

R2D TCVOC
Concentration (ug/L)
120
100
80
60
40
20
0
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

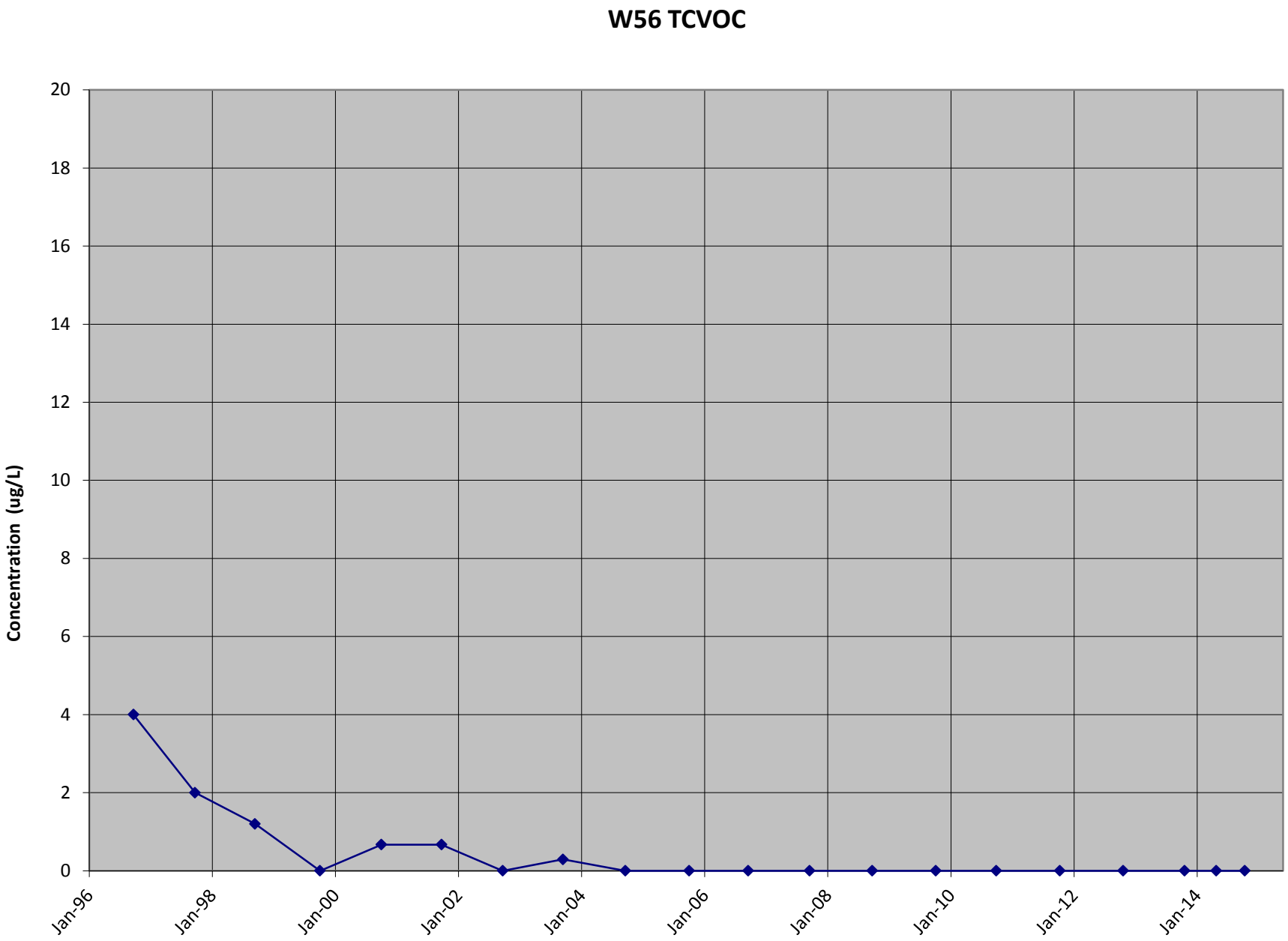

R3D TCVOC
Concentration (ug/L)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

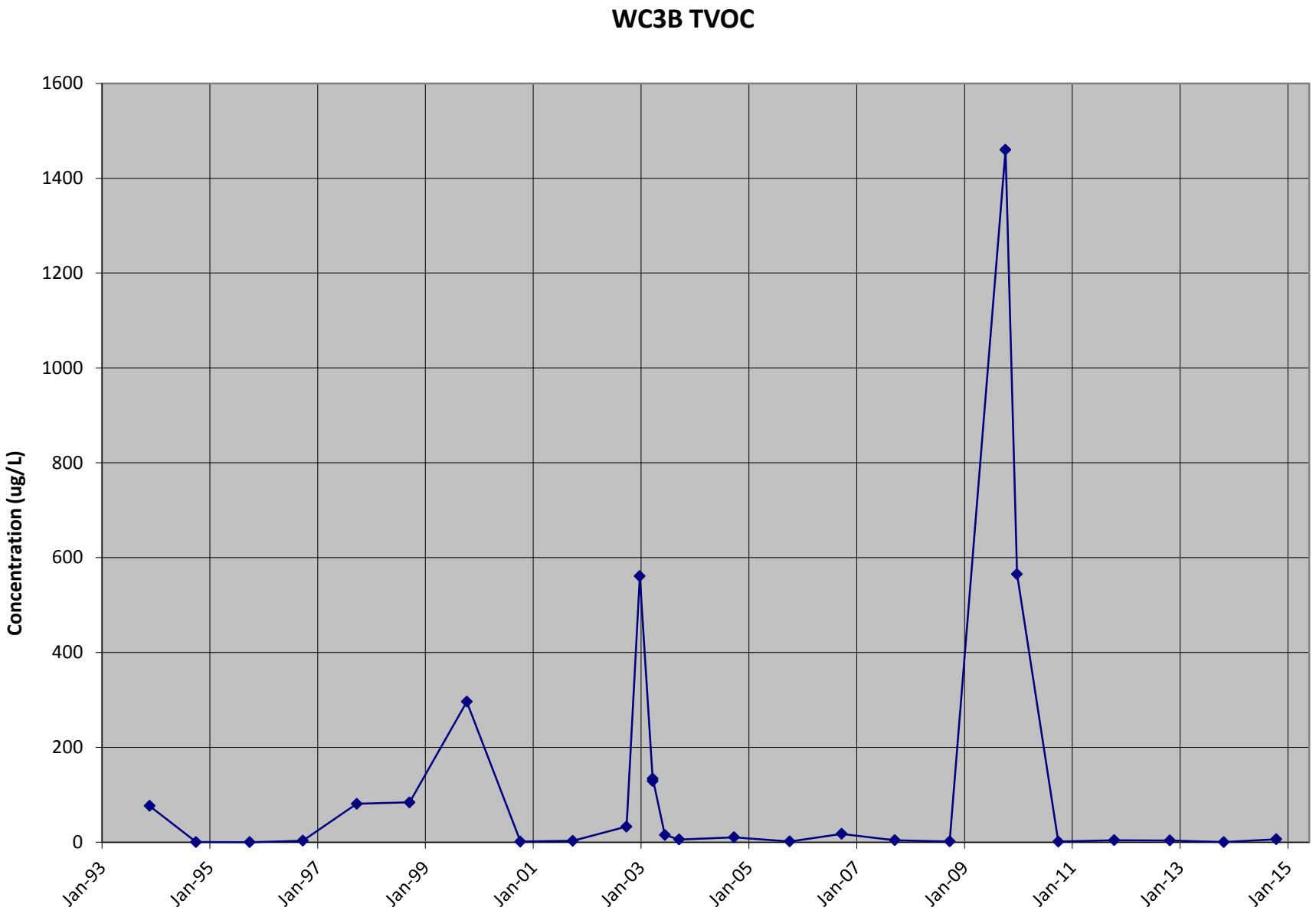

R4D TCVOC
Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

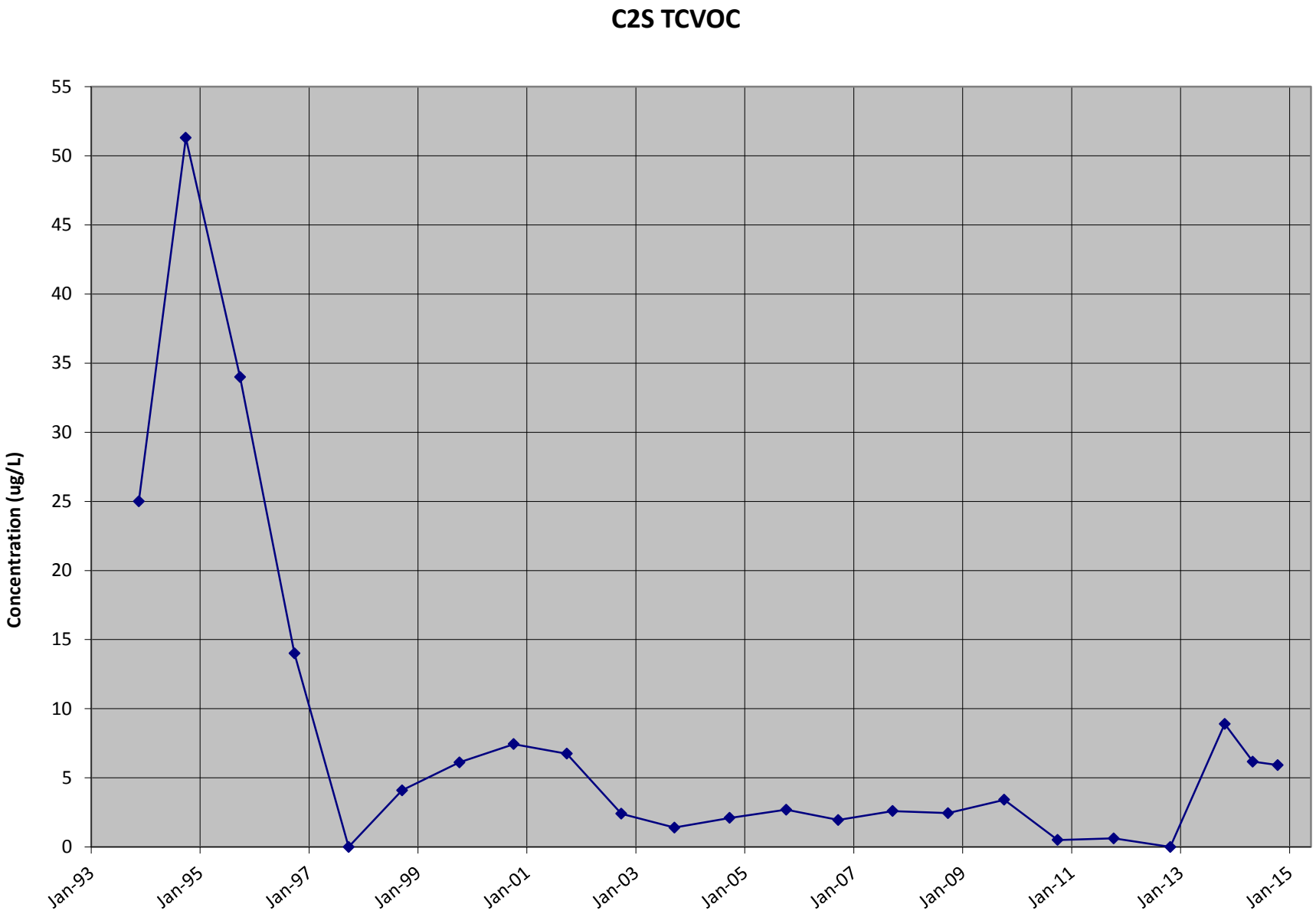

W52 TCVOC
Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

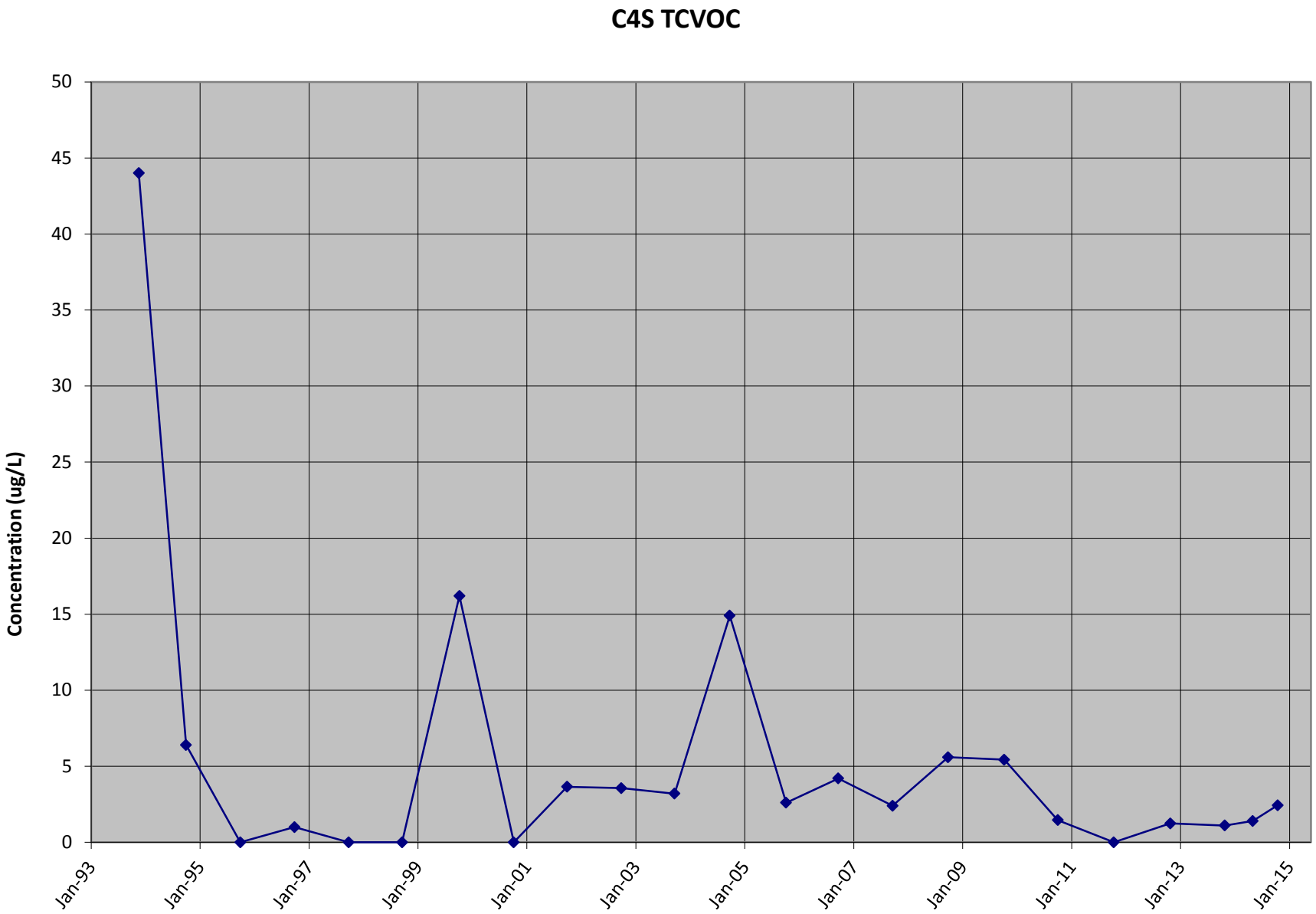

W53A TCVOC
Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

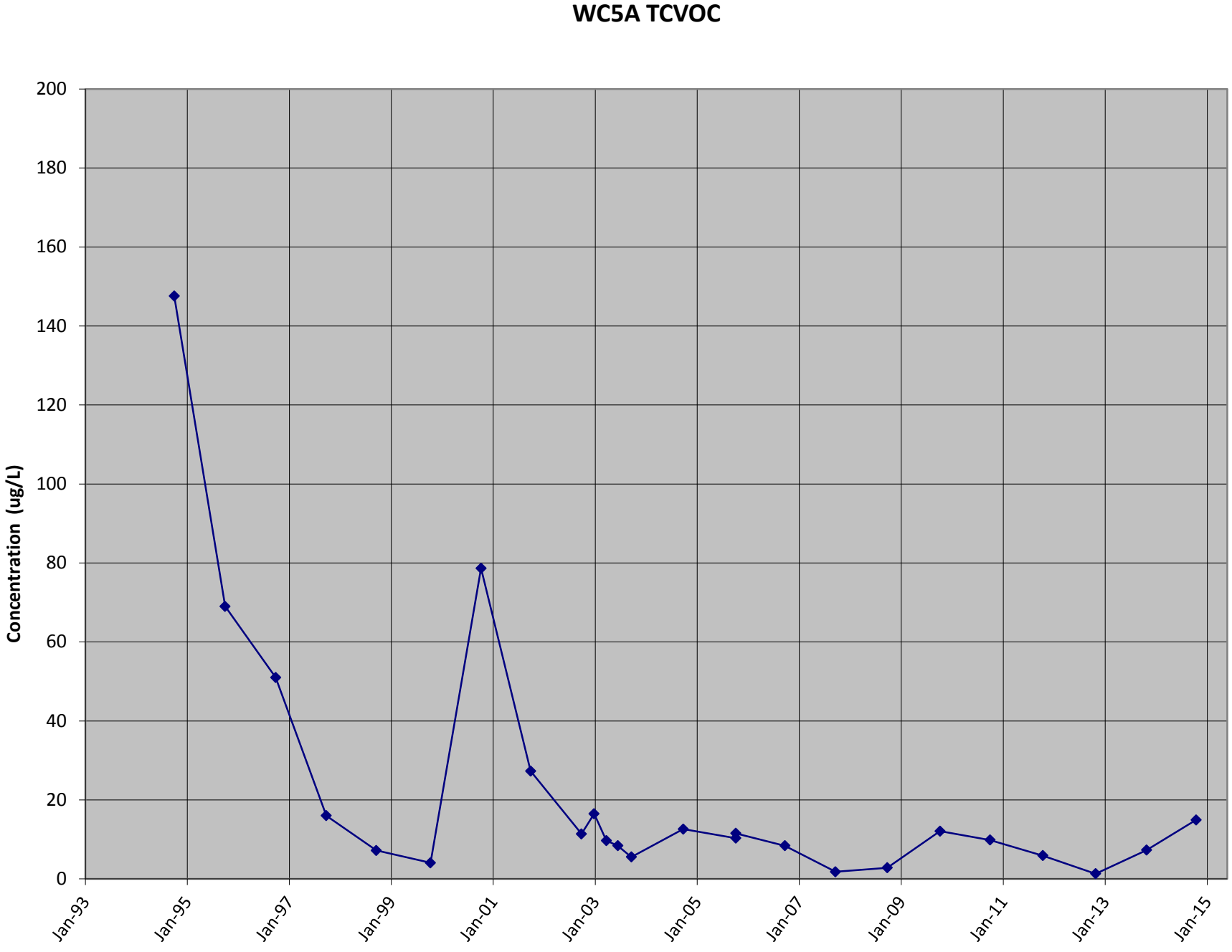

W55 TCVOC
Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-95
Dec-96
Jan-99
Dec-00
Jan-03
Dec-04
Jan-07
Dec-08
Jan-11
Dec-12
Jan-15

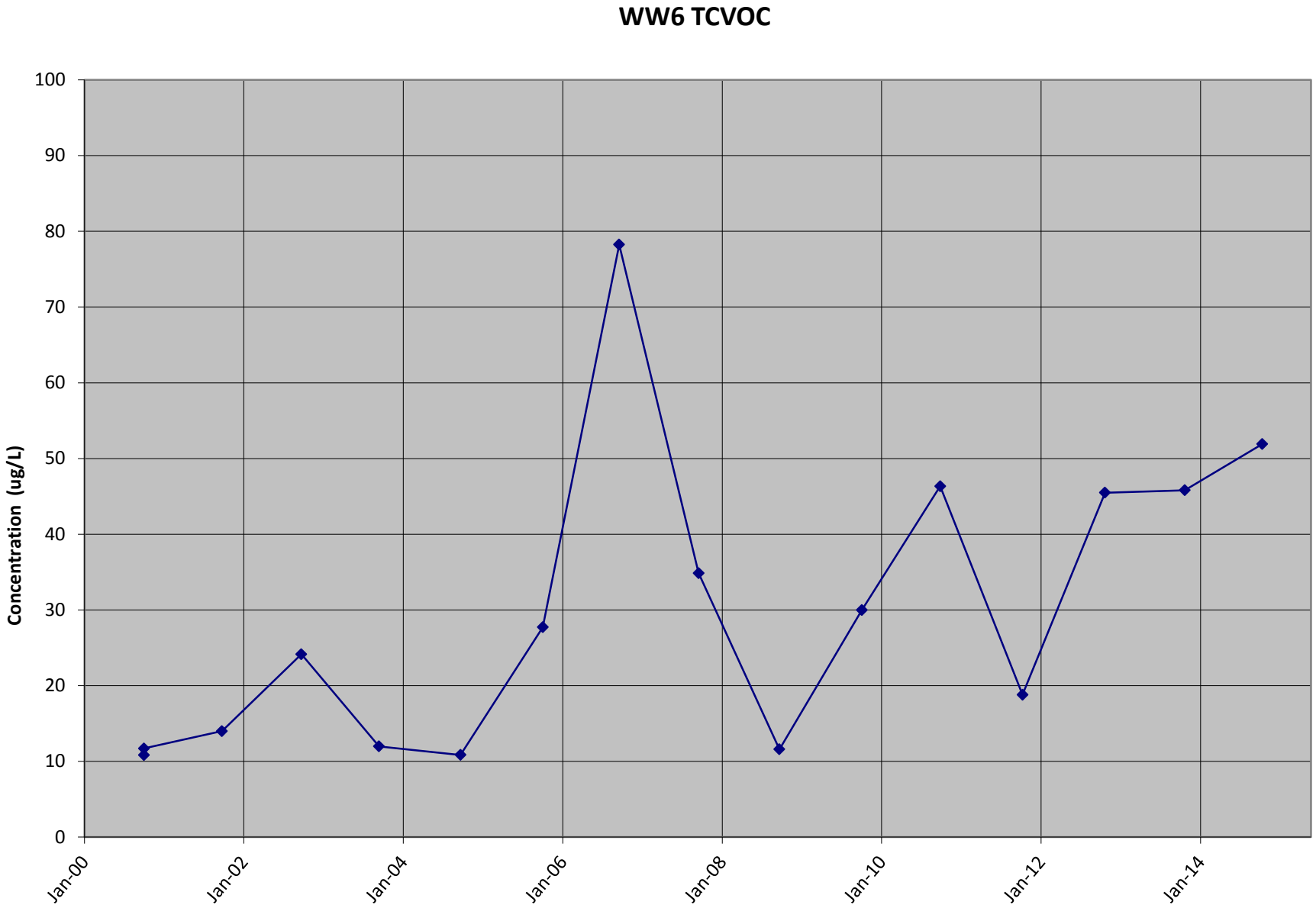

W56 TCVOC
Concentration (ug/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14

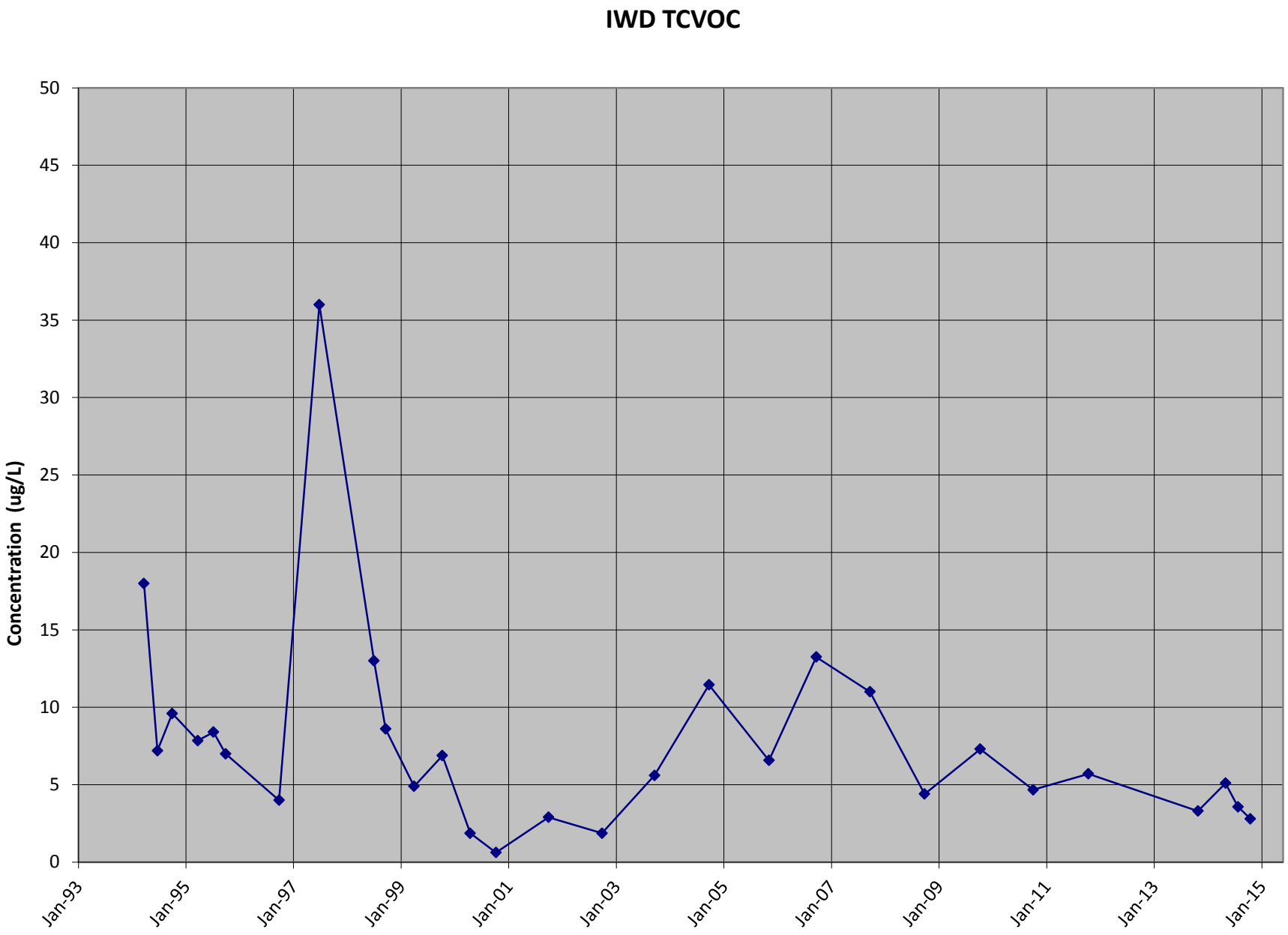

WC3B TVOC
Concentration (ug/L)
1600
1400
1200
1000
800
600
400
200
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

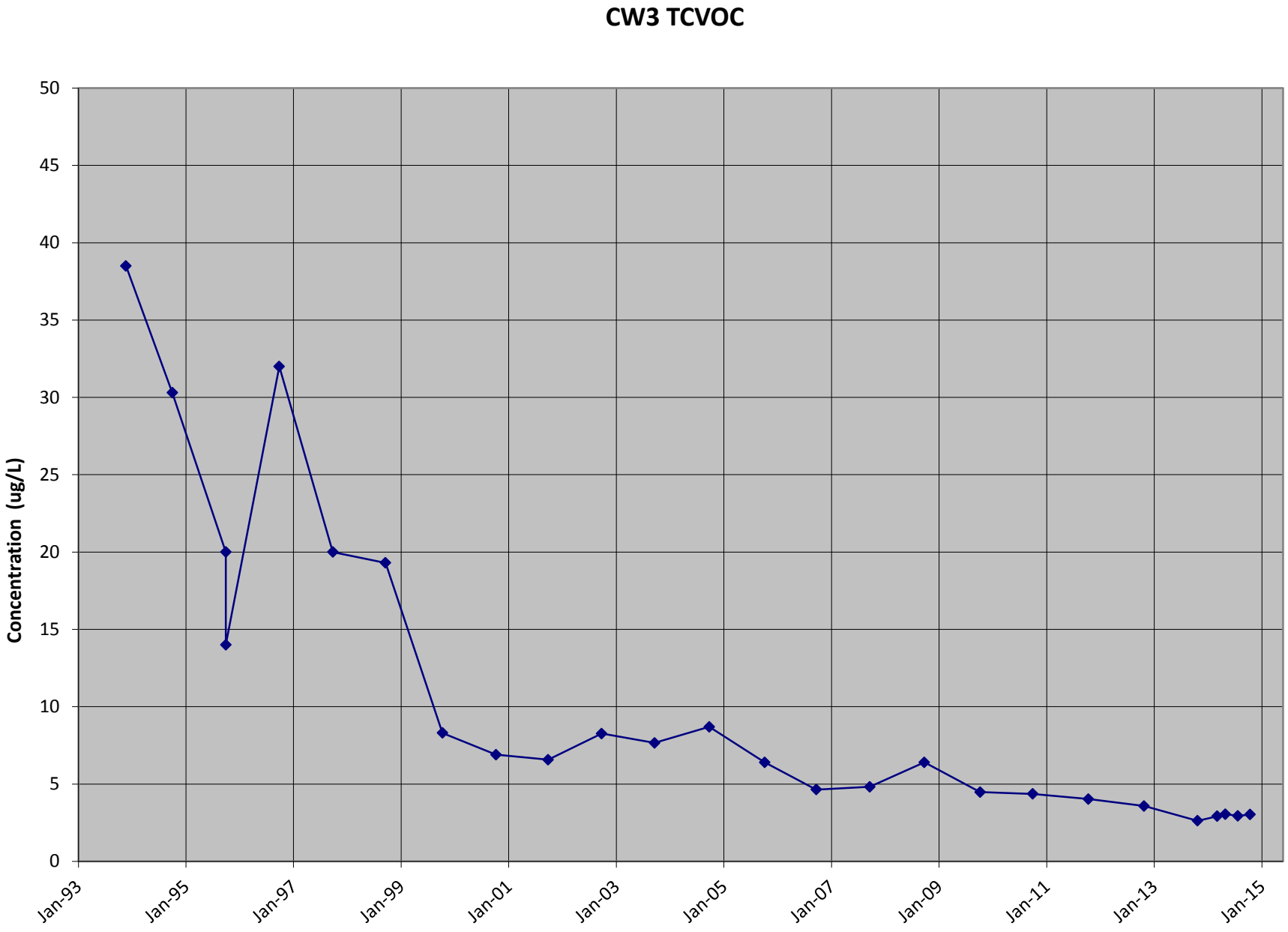

C2S TCVOC
Concentration (ug/L)
55
50
45
40
35
30
25
20
15
10
5
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15


C4S TCVOC
Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

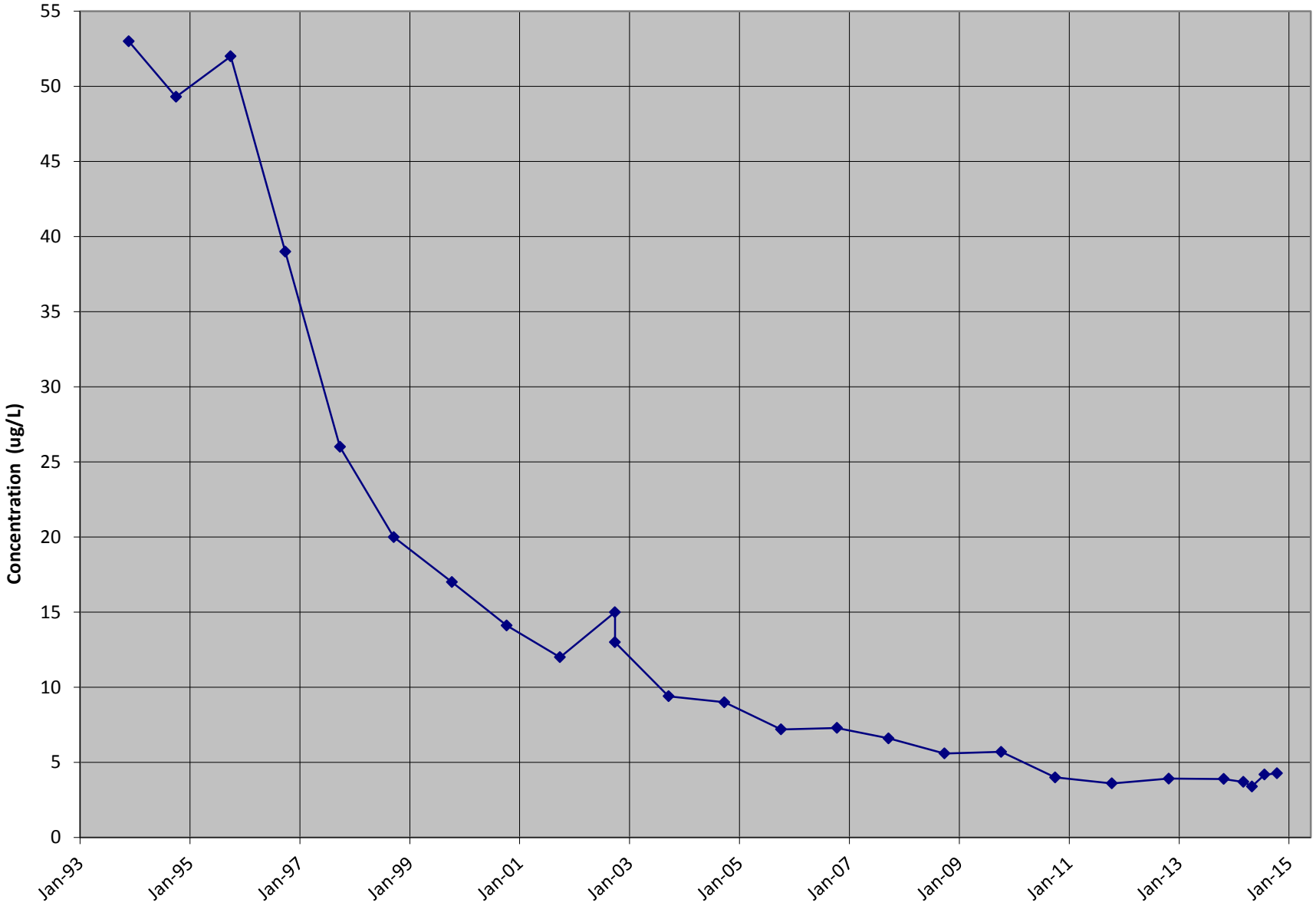

WC5A TCVOC
Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15


WW6 TCVOC
Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14


IWD TCVOC
Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15


CW3 TCVOC
Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

CW6 TCVOC


Concentration (ug/L)
55
50
45
40
35
30
25
20
15
10
5
0
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Jan-15

Appendix D

City of Wausau Treatment Plant Laboratory Reports

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

NLS Project: 209912
NLS Customer: 36394

Fax: 715 261 6946 Phone: 715 261 7288

Client: **Wausau Waterworks**
Attn: Dick Boers
Drinking Water Division
407 Grant Street
Wausau, WI 54403 4783

Project: 2013 Drinking Water VOCs PWS#73701023

EP 300 - VOC NLS ID: 760889
COC: 166319:1 Matrix: DW
Collected: 12/03/13 07:02 Received: 12/03/13

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					12/09/13	EPA 524.2, Rev 4.1	721026460

EP 200 - VOC NLS ID: 760890
COC: 166319:2 Matrix: DW
Collected: 12/03/13 11:05 Received: 12/03/13

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					12/05/13	EPA 524.2, Rev 4.1	721026460

Trip Blank NLS ID: 760891
COC: 166319 Matrix: TB
Collected: 12/03/13 00:00 Received: 12/03/13

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					12/05/13	EPA 524.2, Rev 4.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected (< LOD) 1000 ug/L = 1 mg/L
DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

NLS Project: 214554
NLS Customer: 36394

Client: Wausau Waterworks
Attn: Dick Boers
Drinking Water Division
407 Grant Street
Wausau, WI 54403 4783

Fax: 715 261 6946 Phone: 715 261 7288

Project: 2014 Volatiles PWS#73701023

200 NLS ID: 774544
COC: 173932:1 Matrix: DW
Collected: 03/13/14 07:05 Received: 03/13/14

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					03/20/14	EPA 524.2, Rev 4.1	721026460

300 NLS ID: 774545
COC: 173932:2 Matrix: DW
Collected: 03/13/14 11:11 Received: 03/13/14

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					03/20/14	EPA 524.2, Rev 4.1	721026460

Trip Blank NLS ID: 774546
COC: 173932 Matrix: TB
Collected: 03/13/14 00:00 Received: 03/13/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					03/19/14	EPA 524.2, Rev 4.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected (< LOD) 1000 ug/L = 1 mg/L
DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks **NLS Project: 214554**

Project Description: 2014 Volatiles

Project Title: PWS#73701023 **Template: AGIDNRL Printed: 03/21/2014 09:51**

Sample: 774544 200 Collected: 03/13/14 Analyzed: 03/19/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.22	0.72	5	
Bromobenzene	ND	ug/L	1	0.17	0.57		
Bromodichloromethane	0.70	ug/L	1	0.15	0.49	80	
Bromoform	ND	ug/L	1	0.16	0.53	80	
Bromomethane	ND	ug/L	1	0.26	0.85		
Carbon Tetrachloride	ND	ug/L	1	0.20	0.66	5	
Chloroethane	ND	ug/L	1	0.94	3.1		
Chloroform	22	ug/L	2	0.39	1.4	80	
Chloromethane	ND	ug/L	1	0.16	0.53		
o-Chlorotoluene	ND	ug/L	1	0.18	0.59		
p-Chlorotoluene	ND	ug/L	1	0.19	0.63		
Dibromochloromethane	ND	ug/L	1	0.15	0.49	80	
Dibromomethane	ND	ug/L	1	0.22	0.74		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.21	0.69		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.57	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.17	0.56	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.65		
1,2-Dichloroethane	ND	ug/L	1	0.16	0.54	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.68	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.19	0.65	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.14	0.45	100	
Dichloromethane	ND	ug/L	1	0.19	0.63	5	
1,2-Dichloropropane	ND	ug/L	1	0.24	0.78	5	
1,3-Dichloropropane	ND	ug/L	1	0.19	0.63		
2,2-Dichloropropane	ND	ug/L	1	0.14	0.46		
1,1-Dichloropropene	ND	ug/L	1	0.10	0.32		
1,3-Dichloropropene	ND	ug/L	1	0.36	1.2		
Ethylbenzene	ND	ug/L	1	0.19	0.64	700	
Chlorobenzene	ND	ug/L	1	0.19	0.63	100	
Styrene	ND	ug/L	1	0.17	0.56	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.18	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.49		
Tetrachloroethene	ND	ug/L	1	0.18	0.61	5	
Toluene	ND	ug/L	1	0.18	0.59	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.19	0.62	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.15	0.51	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.20	0.65	5	
Trichloroethene	ND	ug/L	1	0.11	0.36	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.19	0.62		
Vinyl chloride	ND	ug/L	1	0.18	0.61	.2	
Xylene total	ND	ug/L	1	0.53	1.8	10000	
4-Bromofluorobenzene (SURR)	81%						S
1,2-Dichlorobenzene-d4 (SURR)	87%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form
Customer: Wausau Waterworks NLS Project: 214554
Project Description: 2014 Volatiles
Project Title: PWS#73701023 Template: AGIDNRL Printed: 03/21/2014 09:51

Sample: 774545 300 Collected: 03/13/14 Analyzed: 03/19/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.22	0.72	5	
Bromobenzene	ND	ug/L	1	0.17	0.57		
Bromodichloromethane	0.67	ug/L	1	0.15	0.49	80	
Bromoform	ND	ug/L	1	0.16	0.53	80	
Bromomethane	ND	ug/L	1	0.26	0.85		
Carbon Tetrachloride	ND	ug/L	1	0.20	0.66	5	
Chloroethane	ND	ug/L	1	0.94	3.1		
Chloroform	20	ug/L	2	0.39	1.4	80	
Chloromethane	ND	ug/L	1	0.16	0.53		
o-Chlorotoluene	ND	ug/L	1	0.18	0.59		
p-Chlorotoluene	ND	ug/L	1	0.19	0.63		
Dibromochloromethane	ND	ug/L	1	0.15	0.49	80	
Dibromomethane	ND	ug/L	1	0.22	0.74		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.21	0.69		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.57	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.17	0.56	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.65		
1,2-Dichloroethane	ND	ug/L	1	0.16	0.54	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.68	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.19	0.65	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.14	0.45	100	
Dichloromethane	ND	ug/L	1	0.19	0.63	5	
1,2-Dichloropropane	ND	ug/L	1	0.24	0.78	5	
1,3-Dichloropropane	ND	ug/L	1	0.19	0.63		
2,2-Dichloropropane	ND	ug/L	1	0.14	0.46		
1,1-Dichloropropene	ND	ug/L	1	0.10	0.32		
1,3-Dichloropropene	ND	ug/L	1	0.36	1.2		
Ethylbenzene	ND	ug/L	1	0.19	0.64	700	
Chlorobenzene	ND	ug/L	1	0.19	0.63	100	
Styrene	ND	ug/L	1	0.17	0.56	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.18	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.49		
Tetrachloroethene	ND	ug/L	1	0.18	0.61	5	
Toluene	ND	ug/L	1	0.18	0.59	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.19	0.62	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.15	0.51	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.20	0.65	5	
Trichloroethene	ND	ug/L	1	0.11	0.36	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.19	0.62		
Vinyl chloride	ND	ug/L	1	0.18	0.61	.2	
Xylene total	ND	ug/L	1	0.53	1.8	10000	
4-Bromofluorobenzene (SURR)	81%						S
1,2-Dichlorobenzene-d4 (SURR)	89%						S

NOTES APPLICABLE TO THIS ANALYSIS:
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form
Customer: Wausau Waterworks NLS Project: 214554
Project Description: 2014 Volatiles
Project Title: PWS#73701023 Template: AGIDNRL Printed: 03/21/2014 09:51

Sample: 774546 Trip Blank Collected: 03/13/14 Analyzed: 03/19/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.22	0.72	
Bromobenzene	ND	ug/L	1	0.17	0.57	
Bromodichloromethane	ND	ug/L	1	0.15	0.49	
Bromoform	ND	ug/L	1	0.16	0.53	
Bromomethane	ND	ug/L	1	0.26	0.85	
Carbon Tetrachloride	ND	ug/L	1	0.20	0.66	
Chloroethane	ND	ug/L	1	0.94	3.1	
Chloroform	ND	ug/L	1	0.19	0.62	
Chloromethane	ND	ug/L	1	0.16	0.53	
o-Chlorotoluene	ND	ug/L	1	0.18	0.59	
p-Chlorotoluene	ND	ug/L	1	0.19	0.63	
Dibromochloromethane	ND	ug/L	1	0.15	0.49	
Dibromomethane	ND	ug/L	1	0.22	0.74	
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.21	0.69	
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.57	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.17	0.56	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.65	
1,2-Dichloroethane	ND	ug/L	1	0.16	0.54	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.68	
cis-1,2-Dichloroethene	ND	ug/L	1	0.19	0.65	
trans-1,2-Dichloroethene	ND	ug/L	1	0.14	0.45	
Dichloromethane	ND	ug/L	1	0.19	0.63	
1,2-Dichloropropane	ND	ug/L	1	0.24	0.78	
1,3-Dichloropropane	ND	ug/L	1	0.19	0.63	
2,2-Dichloropropane	ND	ug/L	1	0.14	0.46	
1,1-Dichloropropene	ND	ug/L	1	0.10	0.32	
1,3-Dichloropropene	ND	ug/L	1	0.36	1.2	
Ethylbenzene	ND	ug/L	1	0.19	0.64	
Chlorobenzene	ND	ug/L	1	0.19	0.63	
Styrene	ND	ug/L	1	0.17	0.56	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.18	0.59	
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.49	
Tetrachloroethene	ND	ug/L	1	0.18	0.61	
Toluene	ND	ug/L	1	0.18	0.59	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.19	0.62	
1,1,1-Trichloroethane	ND	ug/L	1	0.15	0.51	
1,1,2-Trichloroethane	ND	ug/L	1	0.20	0.65	
Trichloroethene	ND	ug/L	1	0.11	0.36	
1,2,3-Trichloropropane	ND	ug/L	1	0.19	0.62	
Vinyl chloride	ND	ug/L	1	0.18	0.61	
Xylene total	ND	ug/L	1	0.53	1.8	
4-Bromofluorobenzene (SURR)	78%					S
1,2-Dichlorobenzene-d4 (SURR)	85%					S

NOTES APPLICABLE TO THIS ANALYSIS:
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks NLS Project: 209912

Project Description: 2013 Drinking Water VOCs

Project Title: PWS#73701023 Template: SAT3DNRL Printed: 04/29/2014 11:31

Sample: 760889 EP 300 - VOC Collected: 12/03/13 Analyzed: 12/05/13 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.17	0.60	5	
Bromobenzene	ND	ug/L	1	0.18	0.64		
Bromodichloromethane	3.5	ug/L	1	0.18	0.64	80	
Bromoform	ND	ug/L	1	0.17	0.60	80	
Bromomethane	ND	ug/L	1	0.36	1.3		
Carbon Tetrachloride	ND	ug/L	1	0.24	0.85	5	
Chloroethane	ND	ug/L	1	1.3	4.6		
Chloroform	23	ug/L	2.5	0.49	1.7	80	
Chloromethane	ND	ug/L	1	0.14	0.51		
o-Chlorotoluene	ND	ug/L	1	0.15	0.55		
p-Chlorotoluene	ND	ug/L	1	0.19	0.66		
Dibromochloromethane	[0.27]	ug/L	1	0.15	0.53	80	
Dibromomethane	ND	ug/L	1	0.21	0.75		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.20	0.71		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.61	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.14	0.47	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.68		
1,2-Dichloroethane	ND	ug/L	1	0.23	0.80	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.75	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.47	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.16	0.55	100	
Dichloromethane	ND	ug/L	1	0.17	0.61	5	
1,2-Dichloropropane	ND	ug/L	1	0.26	0.92	5	
1,3-Dichloropropane	ND	ug/L	1	0.26	0.91		
2,2-Dichloropropane	ND	ug/L	1	0.17	0.62		
1,1-Dichloropropene	ND	ug/L	1	0.16	0.55		
1,3-Dichloropropene	ND	ug/L	1	0.35	1.2		
Ethylbenzene	ND	ug/L	1	0.15	0.51	700	
Chlorobenzene	[0.26]	ug/L	1	0.19	0.69	100	
Styrene	ND	ug/L	1	0.20	0.68	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.17	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.55		
Tetrachloroethene	ND	ug/L	1	0.18	0.62	5	
Toluene	ND	ug/L	1	0.14	0.48	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.15	0.51	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.37	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.22	0.78	5	
Trichloroethene	ND	ug/L	1	0.19	0.66	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.25	0.87		
Vinyl chloride	ND	ug/L	1	0.19	0.67	.2	
Xylene total	ND	ug/L	1	0.53	1.9	10000	
4-Bromofluorobenzene (SURR)	86%						S
1,2-Dichlorobenzene-d4 (SURR)	96%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks NLS Project: 209912

Project Description: 2013 Drinking Water VOCs

Project Title: PWS#73701023 Template: SAT3DNRL Printed: 04/29/2014 11:31

Sample: 760890 EP 200 - VOC Collected: 12/03/13 Analyzed: 12/05/13 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.17	0.60	5	
Bromobenzene	ND	ug/L	1	0.18	0.64		
Bromodichloromethane	1.5	ug/L	1	0.18	0.64	80	
Bromoform	ND	ug/L	1	0.17	0.60	80	
Bromomethane	ND	ug/L	1	0.36	1.3		
Carbon Tetrachloride	ND	ug/L	1	0.24	0.85	5	
Chloroethane	ND	ug/L	1	1.3	4.6		
Chloroform	15	ug/L	1	0.20	0.70	80	
Chloromethane	ND	ug/L	1	0.14	0.51		
o-Chlorotoluene	ND	ug/L	1	0.15	0.55		
p-Chlorotoluene	ND	ug/L	1	0.19	0.66		
Dibromochloromethane	ND	ug/L	1	0.15	0.53	80	
Dibromomethane	ND	ug/L	1	0.21	0.75		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.20	0.71		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.61	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.14	0.47	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.68		
1,2-Dichloroethane	ND	ug/L	1	0.23	0.80	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.75	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.47	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.16	0.55	100	
Dichloromethane	ND	ug/L	1	0.17	0.61	5	
1,2-Dichloropropane	ND	ug/L	1	0.26	0.92	5	
1,3-Dichloropropane	ND	ug/L	1	0.26	0.91		
2,2-Dichloropropane	ND	ug/L	1	0.17	0.62		
1,1-Dichloropropene	ND	ug/L	1	0.16	0.55		
1,3-Dichloropropene	ND	ug/L	1	0.35	1.2		
Ethylbenzene	ND	ug/L	1	0.15	0.51	700	
Chlorobenzene	[0.29]	ug/L	1	0.19	0.69	100	
Styrene	ND	ug/L	1	0.20	0.68	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.17	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.55		
Tetrachloroethene	ND	ug/L	1	0.18	0.62	5	
Toluene	ND	ug/L	1	0.14	0.48	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.15	0.51	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.37	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.22	0.78	5	
Trichloroethene	ND	ug/L	1	0.19	0.66	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.25	0.87		
Vinyl chloride	ND	ug/L	1	0.19	0.67	.2	
Xylene total	ND	ug/L	1	0.53	1.9	10000	
4-Bromofluorobenzene (SURR)	86%						S
1,2-Dichlorobenzene-d4 (SURR)	96%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form
Customer: Wausau Waterworks NLS Project: 209912
Project Description: 2013 Drinking Water VOCs
Project Title: PWS#73701023 Template: SAT3DNRL Printed: 04/29/2014 11:31

Sample: 760891 Trip Blank Collected: 12/03/13 Analyzed: 12/05/13 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.17	0.60	
Bromobenzene	ND	ug/L	1	0.18	0.64	
Bromodichloromethane	ND	ug/L	1	0.18	0.64	
Bromoform	ND	ug/L	1	0.17	0.60	
Bromomethane	ND	ug/L	1	0.36	1.3	
Carbon Tetrachloride	ND	ug/L	1	0.24	0.85	
Chloroethane	ND	ug/L	1	1.3	4.6	
Chloroform	ND	ug/L	1	0.20	0.70	
Chloromethane	ND	ug/L	1	0.14	0.51	
o-Chlorotoluene	ND	ug/L	1	0.15	0.55	
p-Chlorotoluene	ND	ug/L	1	0.19	0.66	
Dibromochloromethane	ND	ug/L	1	0.15	0.53	
Dibromomethane	ND	ug/L	1	0.21	0.75	
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.20	0.71	
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.61	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.14	0.47	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.68	
1,2-Dichloroethane	ND	ug/L	1	0.23	0.80	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.75	
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.47	
trans-1,2-Dichloroethene	ND	ug/L	1	0.16	0.55	
Dichloromethane	ND	ug/L	1	0.17	0.61	
1,2-Dichloropropane	ND	ug/L	1	0.26	0.92	
1,3-Dichloropropane	ND	ug/L	1	0.26	0.91	
2,2-Dichloropropane	ND	ug/L	1	0.17	0.62	
1,1-Dichloropropene	ND	ug/L	1	0.16	0.55	
1,3-Dichloropropene	ND	ug/L	1	0.35	1.2	
Ethylbenzene	ND	ug/L	1	0.15	0.51	
Chlorobenzene	ND	ug/L	1	0.19	0.69	
Styrene	ND	ug/L	1	0.20	0.68	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.17	0.59	
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.55	
Tetrachloroethene	ND	ug/L	1	0.18	0.62	
Toluene	ND	ug/L	1	0.14	0.48	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.15	0.51	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.37	
1,1,2-Trichloroethane	ND	ug/L	1	0.22	0.78	
Trichloroethene	ND	ug/L	1	0.19	0.66	
1,2,3-Trichloropropane	ND	ug/L	1	0.25	0.87	
Vinyl chloride	ND	ug/L	1	0.19	0.67	
Xylene total	ND	ug/L	1	0.53	1.9	
4-Bromofluorobenzene (SURR)	81%					S
1,2-Dichlorobenzene-d4 (SURR)	83%					S

NOTES APPLICABLE TO THIS ANALYSIS:
S = This compound is a surrogate used to evaluate the quality control of a method.

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

NLS Project: 219016
NLS Customer: 36394

Client: Wausau Waterworks
Attn: Dick Boers
Drinking Water Division
407 Grant Street
Wausau, WI 54403 4783

Fax: 715 261 6946 Phone: 715 261 7288

Project: 2014 Drinking Water VOCs PWS#73701023

200 NLS ID: 789472
COC: 143816:1 Matrix: DW
Collected: 05/16/14 07:03 Received: 05/16/14

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					05/23/14	EPA 524.2, Rev 4.1	721026460

300 NLS ID: 789473
COC: 143816:2 Matrix: DW
Collected: 05/16/14 11:10 Received: 05/16/14

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					05/23/14	EPA 524.2, Rev 4.1	721026460

Trip Blank NLS ID: 789474
COC: 143816 Matrix: TB
Collected: 05/16/14 00:00 Received: 05/16/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					05/24/14	EPA 524.2, Rev 4.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected (< LOD) 1000 ug/L = 1 mg/L
DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks NLS Project: 219016

Project Description: 2014 Drinking Water VOCs

Project Title: PWS#73701023 Template: AGIDNRL Printed: 05/27/2014 11:24

Sample: 789474 Trip Blank Collected: 05/16/14 Analyzed: 05/24/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.22	0.72	
Bromobenzene	ND	ug/L	1	0.17	0.57	
Bromodichloromethane	ND	ug/L	1	0.15	0.49	
Bromoform	ND	ug/L	1	0.16	0.53	
Bromomethane	ND	ug/L	1	0.26	0.85	
Carbon Tetrachloride	ND	ug/L	1	0.20	0.66	
Chloroethane	ND	ug/L	1	0.94	3.1	
Chloroform	ND	ug/L	1	0.19	0.62	
Chloromethane	ND	ug/L	1	0.16	0.53	
o-Chlorotoluene	ND	ug/L	1	0.18	0.59	
p-Chlorotoluene	ND	ug/L	1	0.19	0.63	
Dibromochloromethane	ND	ug/L	1	0.15	0.49	
Dibromomethane	ND	ug/L	1	0.22	0.74	
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.21	0.69	
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.57	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.17	0.56	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.65	
1,2-Dichloroethane	ND	ug/L	1	0.16	0.54	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.68	
cis-1,2-Dichloroethene	ND	ug/L	1	0.19	0.65	
trans-1,2-Dichloroethene	ND	ug/L	1	0.14	0.45	
Dichloromethane	ND	ug/L	1	0.19	0.63	
1,2-Dichloropropane	ND	ug/L	1	0.24	0.78	
1,3-Dichloropropane	ND	ug/L	1	0.19	0.63	
2,2-Dichloropropane	ND	ug/L	1	0.14	0.46	
1,1-Dichloropropene	ND	ug/L	1	0.10	0.32	
1,3-Dichloropropene	ND	ug/L	1	0.36	1.2	
Ethylbenzene	ND	ug/L	1	0.19	0.64	
Chlorobenzene	ND	ug/L	1	0.19	0.63	
Styrene	ND	ug/L	1	0.17	0.56	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.18	0.59	
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.49	
Tetrachloroethene	ND	ug/L	1	0.18	0.61	
Toluene	ND	ug/L	1	0.18	0.59	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.19	0.62	
1,1,1-Trichloroethane	ND	ug/L	1	0.15	0.51	
1,1,2-Trichloroethane	ND	ug/L	1	0.20	0.65	
Trichloroethene	ND	ug/L	1	0.11	0.36	
1,2,3-Trichloropropane	ND	ug/L	1	0.19	0.62	
Vinyl chloride	ND	ug/L	1	0.18	0.61	
Xylene total	ND	ug/L	1	0.53	1.8	
4-Bromofluorobenzene (SURR)	75%					S
1,2-Dichlorobenzene-d4 (SURR)	75%					S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks NLS Project: 219016

Project Description: 2014 Drinking Water VOCs

Project Title: PWS#73701023 Template: SAT3DNRL Printed: 05/27/2014 11:24

Sample: 789472 200 Collected: 05/16/14 Analyzed: 05/23/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.17	0.60	5	
Bromobenzene	ND	ug/L	1	0.18	0.64		
Bromodichloromethane	0.67	ug/L	1	0.18	0.64	80	
Bromoform	ND	ug/L	1	0.17	0.60	80	
Bromomethane	ND	ug/L	1	0.36	1.3		
Carbon Tetrachloride	ND	ug/L	1	0.24	0.85	5	
Chloroethane	ND	ug/L	1	1.3	4.6		
Chloroform	13	ug/L	1	0.20	0.70	80	
Chloromethane	ND	ug/L	1	0.14	0.51		
o-Chlorotoluene	ND	ug/L	1	0.15	0.55		
p-Chlorotoluene	ND	ug/L	1	0.19	0.66		
Dibromochloromethane	ND	ug/L	1	0.15	0.53	80	
Dibromomethane	ND	ug/L	1	0.21	0.75		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.20	0.71		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.61	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.14	0.47	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.68		
1,2-Dichloroethane	ND	ug/L	1	0.23	0.80	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.75	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.47	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.16	0.55	100	
Dichloromethane	ND	ug/L	1	0.17	0.61	5	
1,2-Dichloropropane	ND	ug/L	1	0.26	0.92	5	
1,3-Dichloropropane	ND	ug/L	1	0.26	0.91		
2,2-Dichloropropane	ND	ug/L	1	0.17	0.62		
1,1-Dichloropropene	ND	ug/L	1	0.16	0.55		
1,3-Dichloropropene	ND	ug/L	1	0.35	1.2		
Ethylbenzene	ND	ug/L	1	0.15	0.51	700	
Chlorobenzene	ND	ug/L	1	0.19	0.69	100	
Styrene	ND	ug/L	1	0.20	0.68	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.17	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.55		
Tetrachloroethene	ND	ug/L	1	0.18	0.62	5	
Toluene	ND	ug/L	1	0.14	0.48	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.15	0.51	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.37	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.22	0.78	5	
Trichloroethene	ND	ug/L	1	0.19	0.66	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.25	0.87		
Vinyl chloride	ND	ug/L	1	0.19	0.67	.2	
Xylene total	ND	ug/L	1	0.53	1.9	10000	
4-Bromofluorobenzene (SURR)	67%						S
1,2-Dichlorobenzene-d4 (SURR)	87%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks NLS Project: 219016

Project Description: 2014 Drinking Water VOCs

Project Title: PWS#73701023 Template: SAT3DNRL Printed: 05/27/2014 11:24

Sample: 789473 300 Collected: 05/16/14 Analyzed: 05/23/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.17	0.60	5	
Bromobenzene	ND	ug/L	1	0.18	0.64		
Bromodichloromethane	[0.36]	ug/L	1	0.18	0.64	80	
Bromoform	ND	ug/L	1	0.17	0.60	80	
Bromomethane	ND	ug/L	1	0.36	1.3		
Carbon Tetrachloride	ND	ug/L	1	0.24	0.85	5	
Chloroethane	ND	ug/L	1	1.3	4.6		
Chloroform	13	ug/L	1	0.20	0.70	80	
Chloromethane	ND	ug/L	1	0.14	0.51		
o-Chlorotoluene	ND	ug/L	1	0.15	0.55		
p-Chlorotoluene	ND	ug/L	1	0.19	0.66		
Dibromochloromethane	ND	ug/L	1	0.15	0.53	80	
Dibromomethane	ND	ug/L	1	0.21	0.75		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.20	0.71		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.61	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.14	0.47	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.68		
1,2-Dichloroethane	ND	ug/L	1	0.23	0.80	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.75	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.47	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.16	0.55	100	
Dichloromethane	ND	ug/L	1	0.17	0.61	5	
1,2-Dichloropropane	ND	ug/L	1	0.26	0.92	5	
1,3-Dichloropropane	ND	ug/L	1	0.26	0.91		
2,2-Dichloropropane	ND	ug/L	1	0.17	0.62		
1,1-Dichloropropene	ND	ug/L	1	0.16	0.55		
1,3-Dichloropropene	ND	ug/L	1	0.35	1.2		
Ethylbenzene	ND	ug/L	1	0.15	0.51	700	
Chlorobenzene	ND	ug/L	1	0.19	0.69	100	
Styrene	ND	ug/L	1	0.20	0.68	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.17	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.55		
Tetrachloroethene	ND	ug/L	1	0.18	0.62	5	
Toluene	ND	ug/L	1	0.14	0.48	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.15	0.51	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.37	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.22	0.78	5	
Trichloroethene	ND	ug/L	1	0.19	0.66	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.25	0.87		
Vinyl chloride	ND	ug/L	1	0.19	0.67	.2	
Xylene total	ND	ug/L	1	0.53	1.9	10000	
4-Bromofluorobenzene (SURR)	66%						S
1,2-Dichlorobenzene-d4 (SURR)	87%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks NLS Project: 227065

Project Description: 2014 Drinking Water

Project Title: PWS#73701023 Template: AGIDNRL Printed: 10/08/2014 09:41

Sample: 817478 200 - VOC Collected: 09/11/14 Analyzed: 09/22/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.22	0.72	5	
Bromobenzene	ND	ug/L	1	0.17	0.57		
Bromodichloromethane	[0.21]	ug/L	1	0.15	0.49	80	
Bromoform	ND	ug/L	1	0.16	0.53	80	
Bromomethane	ND	ug/L	1	0.26	0.85		
Carbon Tetrachloride	ND	ug/L	1	0.20	0.66	5	
Chloroethane	ND	ug/L	1	0.94	3.1		
Chloroform	6.9	ug/L	1	0.19	0.62	80	
Chloromethane	ND	ug/L	1	0.16	0.53		
o-Chlorotoluene	ND	ug/L	1	0.18	0.59		
p-Chlorotoluene	ND	ug/L	1	0.19	0.63		
Dibromochloromethane	ND	ug/L	1	0.15	0.49	80	
Dibromomethane	ND	ug/L	1	0.22	0.74		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.21	0.69		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.57	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.17	0.56	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.65		
1,2-Dichloroethane	ND	ug/L	1	0.16	0.54	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.68	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.19	0.65	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.14	0.45	100	
Dichloromethane	ND	ug/L	1	0.19	0.63	5	
1,2-Dichloropropane	ND	ug/L	1	0.24	0.78	5	
1,3-Dichloropropane	ND	ug/L	1	0.19	0.63		
2,2-Dichloropropane	ND	ug/L	1	0.14	0.46		
1,1-Dichloropropene	ND	ug/L	1	0.10	0.32		
1,3-Dichloropropene	ND	ug/L	1	0.36	1.2		
Ethylbenzene	ND	ug/L	1	0.19	0.64	700	
Chlorobenzene	ND	ug/L	1	0.19	0.63	100	
Styrene	ND	ug/L	1	0.17	0.56	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.18	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.49		
Tetrachloroethene	ND	ug/L	1	0.18	0.61	5	
Toluene	ND	ug/L	1	0.18	0.59	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.19	0.62	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.15	0.51	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.20	0.65	5	
Trichloroethene	ND	ug/L	1	0.11	0.36	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.19	0.62		
Vinyl chloride	ND	ug/L	1	0.18	0.61	.2	
Xylene total	ND	ug/L	1	0.53	1.8	10000	
4-Bromofluorobenzene (SURR)	96%						S
1,2-Dichlorobenzene-d4 (SURR)	103%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks **NLS Project: 227065**

Project Description: 2014 Drinking Water

Project Title: PWS#73701023 **Template: AGIDNRL** **Printed: 10/08/2014 09:41**

Sample: 817483 300 - VOC Collected: 09/11/14 Analyzed: 09/22/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.22	0.72	5	
Bromobenzene	ND	ug/L	1	0.17	0.57		
Bromodichloromethane	[0.19]	ug/L	1	0.15	0.49	80	
Bromoform	ND	ug/L	1	0.16	0.53	80	
Bromomethane	ND	ug/L	1	0.26	0.85		
Carbon Tetrachloride	ND	ug/L	1	0.20	0.66	5	
Chloroethane	ND	ug/L	1	0.94	3.1		
Chloroform	6.2	ug/L	1	0.19	0.62	80	
Chloromethane	ND	ug/L	1	0.16	0.53		
o-Chlorotoluene	ND	ug/L	1	0.18	0.59		
p-Chlorotoluene	ND	ug/L	1	0.19	0.63		
Dibromochloromethane	ND	ug/L	1	0.15	0.49	80	
Dibromomethane	ND	ug/L	1	0.22	0.74		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.21	0.69		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.57	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.17	0.56	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.65		
1,2-Dichloroethane	ND	ug/L	1	0.16	0.54	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.68	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.19	0.65	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.14	0.45	100	
Dichloromethane	ND	ug/L	1	0.19	0.63	5	
1,2-Dichloropropane	ND	ug/L	1	0.24	0.78	5	
1,3-Dichloropropane	ND	ug/L	1	0.19	0.63		
2,2-Dichloropropane	ND	ug/L	1	0.14	0.46		
1,1-Dichloropropene	ND	ug/L	1	0.10	0.32		
1,3-Dichloropropene	ND	ug/L	1	0.36	1.2		
Ethylbenzene	ND	ug/L	1	0.19	0.64	700	
Chlorobenzene	ND	ug/L	1	0.19	0.63	100	
Styrene	ND	ug/L	1	0.17	0.56	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.18	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.49		
Tetrachloroethene	ND	ug/L	1	0.18	0.61	5	
Toluene	ND	ug/L	1	0.18	0.59	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.19	0.62	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.15	0.51	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.20	0.65	5	
Trichloroethene	ND	ug/L	1	0.11	0.36	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.19	0.62		
Vinyl chloride	ND	ug/L	1	0.18	0.61	.2	
Xylene total	ND	ug/L	1	0.53	1.8	10000	
4-Bromofluorobenzene (SURR)	91%						S
1,2-Dichlorobenzene-d4 (SURR)	108%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form
Customer: Wausau Waterworks NLS Project: 227065
Project Description: 2014 Drinking Water
Project Title: PWS#73701023 Template: AGIDNRL Printed: 10/08/2014 09:41

Sample: 817484 Trip Blank Collected: 09/11/14 Analyzed: 09/22/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.22	0.72	
Bromobenzene	ND	ug/L	1	0.17	0.57	
Bromodichloromethane	ND	ug/L	1	0.15	0.49	
Bromoform	ND	ug/L	1	0.16	0.53	
Bromomethane	ND	ug/L	1	0.26	0.85	
Carbon Tetrachloride	ND	ug/L	1	0.20	0.66	
Chloroethane	ND	ug/L	1	0.94	3.1	
Chloroform	ND	ug/L	1	0.19	0.62	
Chloromethane	ND	ug/L	1	0.16	0.53	
o-Chlorotoluene	ND	ug/L	1	0.18	0.59	
p-Chlorotoluene	ND	ug/L	1	0.19	0.63	
Dibromochloromethane	ND	ug/L	1	0.15	0.49	
Dibromomethane	ND	ug/L	1	0.22	0.74	
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.21	0.69	
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.57	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.17	0.56	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.65	
1,2-Dichloroethane	ND	ug/L	1	0.16	0.54	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.68	
cis-1,2-Dichloroethene	ND	ug/L	1	0.19	0.65	
trans-1,2-Dichloroethene	ND	ug/L	1	0.14	0.45	
Dichloromethane	ND	ug/L	1	0.19	0.63	
1,2-Dichloropropane	ND	ug/L	1	0.24	0.78	
1,3-Dichloropropane	ND	ug/L	1	0.19	0.63	
2,2-Dichloropropane	ND	ug/L	1	0.14	0.46	
1,1-Dichloropropene	ND	ug/L	1	0.10	0.32	
1,3-Dichloropropene	ND	ug/L	1	0.36	1.2	
Ethylbenzene	ND	ug/L	1	0.19	0.64	
Chlorobenzene	ND	ug/L	1	0.19	0.63	
Styrene	ND	ug/L	1	0.17	0.56	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.18	0.59	
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.49	
Tetrachloroethene	ND	ug/L	1	0.18	0.61	
Toluene	ND	ug/L	1	0.18	0.59	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.19	0.62	
1,1,1-Trichloroethane	ND	ug/L	1	0.15	0.51	
1,1,2-Trichloroethane	ND	ug/L	1	0.20	0.65	
Trichloroethene	ND	ug/L	1	0.11	0.36	
1,2,3-Trichloropropane	ND	ug/L	1	0.19	0.62	
Vinyl chloride	ND	ug/L	1	0.18	0.61	
Xylene total	ND	ug/L	1	0.53	1.8	
4-Bromofluorobenzene (SURR)	89%					S
1,2-Dichlorobenzene-d4 (SURR)	103%					S

NOTES APPLICABLE TO THIS ANALYSIS:
S = This compound is a surrogate used to evaluate the quality control of a method.

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

NLS Project: 229264
NLS Customer: 36394

Fax: 715 261 6946 Phone: 715 261 7288

Client: Wausau Waterworks
Attn: Dick Boers
Drinking Water Division
407 Grant Street
Wausau, WI 54403 4783

Project: 4th Quarter VOC Analyses PWS#73701023

E -200 VOC NLS ID: 824991
COC: 183834:1 Matrix: DW
Collected: 10/10/14 07:02 Received: 10/10/14

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					10/15/14	EPA 524.2, Rev 4.1	721026460

E -300 VOC NLS ID: 824992
COC: 183834:2 Matrix: DW
Collected: 10/10/14 11:09 Received: 10/10/14

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					10/15/14	EPA 524.2, Rev 4.1	721026460

Trip Blank NLS ID: 824993
COC: 183834:3 Matrix: TB
Collected: 10/10/14 00:00 Received: 10/10/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					10/17/14	EPA 524.2, Rev 4.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected (< LOD) 1000 ug/L = 1 mg/L
DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks **NLS Project: 229264**

Project Description: 4th Quarter VOC Analyses

Project Title: PWS#73701023 **Template: SAT3DNRL** **Printed: 10/20/2014 10:30**

Sample: 824991 E -200 VOC Collected: 10/10/14 Analyzed: 10/15/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.17	0.60	5	
Bromobenzene	ND	ug/L	1	0.18	0.64		
Bromodichloromethane	1.1	ug/L	1	0.18	0.64	80	
Bromoform	ND	ug/L	1	0.17	0.60	80	
Bromomethane	ND	ug/L	1	0.36	1.3		
Carbon Tetrachloride	ND	ug/L	1	0.24	0.85	5	
Chloroethane	ND	ug/L	1	1.3	4.6		
Chloroform	15	ug/L	1	0.20	0.70	80	
Chloromethane	ND	ug/L	1	0.14	0.51		
o-Chlorotoluene	ND	ug/L	1	0.15	0.55		
p-Chlorotoluene	ND	ug/L	1	0.19	0.66		
Dibromochloromethane	ND	ug/L	1	0.15	0.53	80	
Dibromomethane	ND	ug/L	1	0.21	0.75		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.20	0.71		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.61	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.14	0.47	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.68		
1,2-Dichloroethane	ND	ug/L	1	0.23	0.80	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.75	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.47	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.16	0.55	100	
Dichloromethane	ND	ug/L	1	0.17	0.61	5	
1,2-Dichloropropane	ND	ug/L	1	0.26	0.92	5	
1,3-Dichloropropane	ND	ug/L	1	0.26	0.91		
2,2-Dichloropropane	ND	ug/L	1	0.17	0.62		
1,1-Dichloropropene	ND	ug/L	1	0.16	0.55		
1,3-Dichloropropene	ND	ug/L	1	0.35	1.2		
Ethylbenzene	ND	ug/L	1	0.15	0.51	700	
Chlorobenzene	ND	ug/L	1	0.19	0.69	100	
Styrene	ND	ug/L	1	0.20	0.68	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.17	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.55		
Tetrachloroethene	ND	ug/L	1	0.18	0.62	5	
Toluene	ND	ug/L	1	0.14	0.48	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.15	0.51	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.37	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.22	0.78	5	
Trichloroethene	ND	ug/L	1	0.19	0.66	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.25	0.87		
Vinyl chloride	ND	ug/L	1	0.19	0.67	.2	
Xylene total	ND	ug/L	1	0.53	1.9	10000	
4-Bromofluorobenzene (SURR)	103%						S
1,2-Dichlorobenzene-d4 (SURR)	99%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form

Customer: Wausau Waterworks **NLS Project: 229264**

Project Description: 4th Quarter VOC Analyses

Project Title: PWS#73701023 **Template: SAT3DNRL** **Printed: 10/20/2014 10:30**

Sample: 824992 E -300 VOC Collected: 10/10/14 Analyzed: 10/15/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.17	0.60	5	
Bromobenzene	ND	ug/L	1	0.18	0.64		
Bromodichloromethane	[0.22]	ug/L	1	0.18	0.64	80	
Bromoform	ND	ug/L	1	0.17	0.60	80	
Bromomethane	ND	ug/L	1	0.36	1.3		
Carbon Tetrachloride	ND	ug/L	1	0.24	0.85	5	
Chloroethane	ND	ug/L	1	1.3	4.6		
Chloroform	6.0	ug/L	1	0.20	0.70	80	
Chloromethane	ND	ug/L	1	0.14	0.51		
o-Chlorotoluene	ND	ug/L	1	0.15	0.55		
p-Chlorotoluene	ND	ug/L	1	0.19	0.66		
Dibromochloromethane	ND	ug/L	1	0.15	0.53	80	
Dibromomethane	ND	ug/L	1	0.21	0.75		
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.20	0.71		
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.61	600	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.14	0.47	75	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.68		
1,2-Dichloroethane	ND	ug/L	1	0.23	0.80	5	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.75	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.47	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.16	0.55	100	
Dichloromethane	ND	ug/L	1	0.17	0.61	5	
1,2-Dichloropropane	ND	ug/L	1	0.26	0.92	5	
1,3-Dichloropropane	ND	ug/L	1	0.26	0.91		
2,2-Dichloropropane	ND	ug/L	1	0.17	0.62		
1,1-Dichloropropene	ND	ug/L	1	0.16	0.55		
1,3-Dichloropropene	ND	ug/L	1	0.35	1.2		
Ethylbenzene	ND	ug/L	1	0.15	0.51	700	
Chlorobenzene	ND	ug/L	1	0.19	0.69	100	
Styrene	ND	ug/L	1	0.20	0.68	100	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.17	0.59		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.55		
Tetrachloroethene	ND	ug/L	1	0.18	0.62	5	
Toluene	ND	ug/L	1	0.14	0.48	1000	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.15	0.51	70	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.37	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.22	0.78	5	
Trichloroethene	ND	ug/L	1	0.19	0.66	5	
1,2,3-Trichloropropane	ND	ug/L	1	0.25	0.87		
Vinyl chloride	ND	ug/L	1	0.19	0.67	.2	
Xylene total	ND	ug/L	1	0.53	1.9	10000	
4-Bromofluorobenzene (SURR)	108%						S
1,2-Dichlorobenzene-d4 (SURR)	105%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: GCMS 524.2, Rev 4.1 Safe Drinking Water Analysis - DNR Form
Customer: Wausau Waterworks NLS Project: 229264
Project Description: 4th Quarter VOC Analyses
Project Title: PWS#73701023 Template: SAT3DNRL Printed: 10/20/2014 10:30

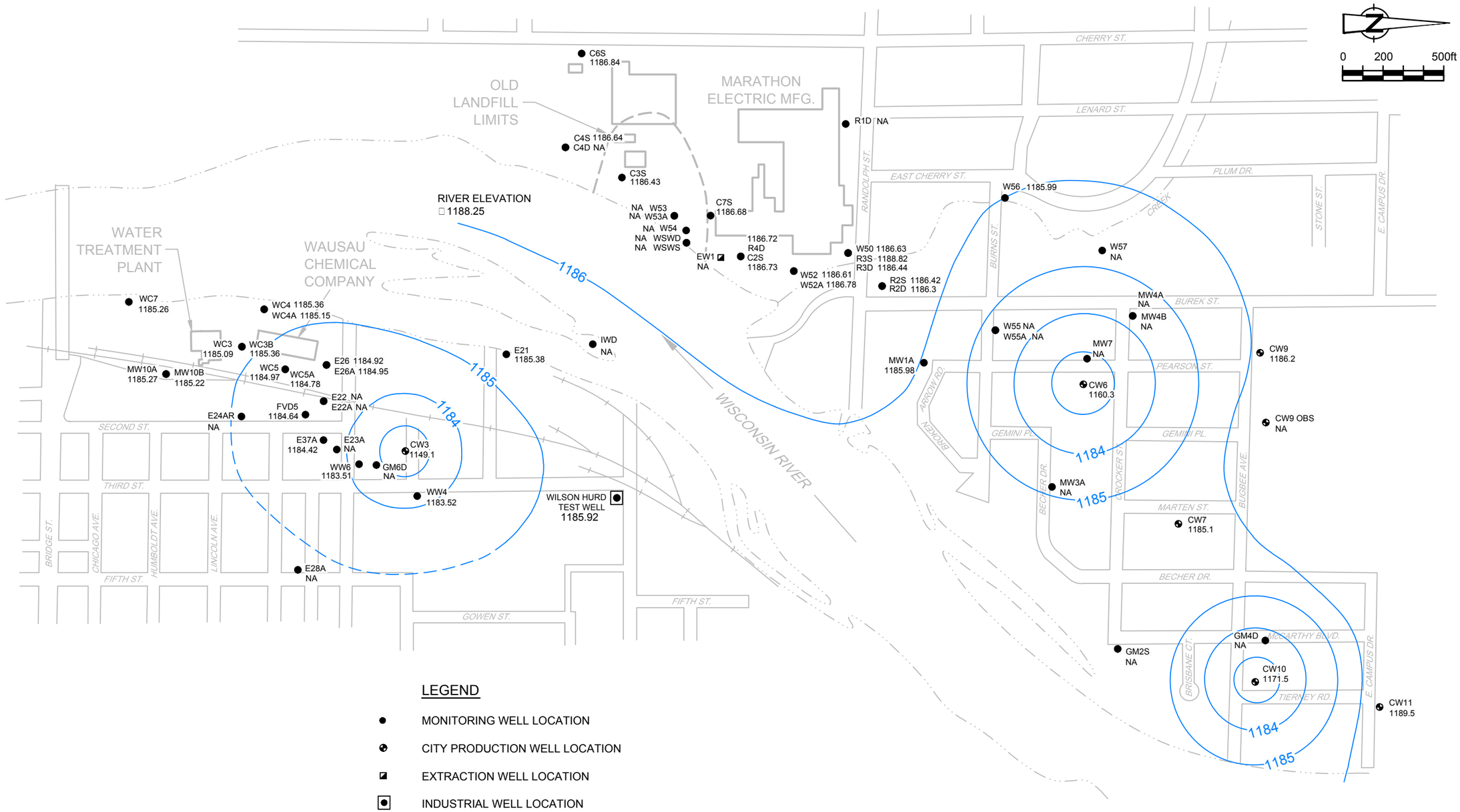
Sample: 824993 Trip Blank Collected: 10/10/14 Analyzed: 10/17/14 - Analytes: 41

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.17	0.60	
Bromobenzene	ND	ug/L	1	0.18	0.64	
Bromodichloromethane	ND	ug/L	1	0.18	0.64	
Bromoform	ND	ug/L	1	0.17	0.60	
Bromomethane	ND	ug/L	1	0.36	1.3	
Carbon Tetrachloride	ND	ug/L	1	0.24	0.85	
Chloroethane	ND	ug/L	1	1.3	4.6	
Chloroform	ND	ug/L	1	0.20	0.70	
Chloromethane	ND	ug/L	1	0.14	0.51	
o-Chlorotoluene	ND	ug/L	1	0.15	0.55	
p-Chlorotoluene	ND	ug/L	1	0.19	0.66	
Dibromochloromethane	ND	ug/L	1	0.15	0.53	
Dibromomethane	ND	ug/L	1	0.21	0.75	
1,3-Dichlorobenzene (m)	ND	ug/L	1	0.20	0.71	
1,2-Dichlorobenzene (o)	ND	ug/L	1	0.17	0.61	
1,4-Dichlorobenzene (p)	ND	ug/L	1	0.14	0.47	
1,1-Dichloroethane	ND	ug/L	1	0.20	0.68	
1,2-Dichloroethane	ND	ug/L	1	0.23	0.80	
1,1-Dichloroethene	ND	ug/L	1	0.21	0.75	
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.47	
trans-1,2-Dichloroethene	ND	ug/L	1	0.16	0.55	
Dichloromethane	ND	ug/L	1	0.17	0.61	
1,2-Dichloropropane	ND	ug/L	1	0.26	0.92	
1,3-Dichloropropane	ND	ug/L	1	0.26	0.91	
2,2-Dichloropropane	ND	ug/L	1	0.17	0.62	
1,1-Dichloropropene	ND	ug/L	1	0.16	0.55	
1,3-Dichloropropene	ND	ug/L	1	0.35	1.2	
Ethylbenzene	ND	ug/L	1	0.15	0.51	
Chlorobenzene	ND	ug/L	1	0.19	0.69	
Styrene	ND	ug/L	1	0.20	0.68	
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.17	0.59	
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.15	0.55	
Tetrachloroethene	ND	ug/L	1	0.18	0.62	
Toluene	ND	ug/L	1	0.14	0.48	
1,2,4-Trichlorobenzene	ND	ug/L	1	0.15	0.51	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.37	
1,1,2-Trichloroethane	ND	ug/L	1	0.22	0.78	
Trichloroethene	ND	ug/L	1	0.19	0.66	
1,2,3-Trichloropropane	ND	ug/L	1	0.25	0.87	
Vinyl chloride	ND	ug/L	1	0.19	0.67	
Xylene total	ND	ug/L	1	0.53	1.9	
4-Bromofluorobenzene (SURR)	102%					S
1,2-Dichlorobenzene-d4 (SURR)	107%					S

NOTES APPLICABLE TO THIS ANALYSIS:
S = This compound is a surrogate used to evaluate the quality control of a method.

Appendix E

2014 Quarterly Groundwater Contour Figures



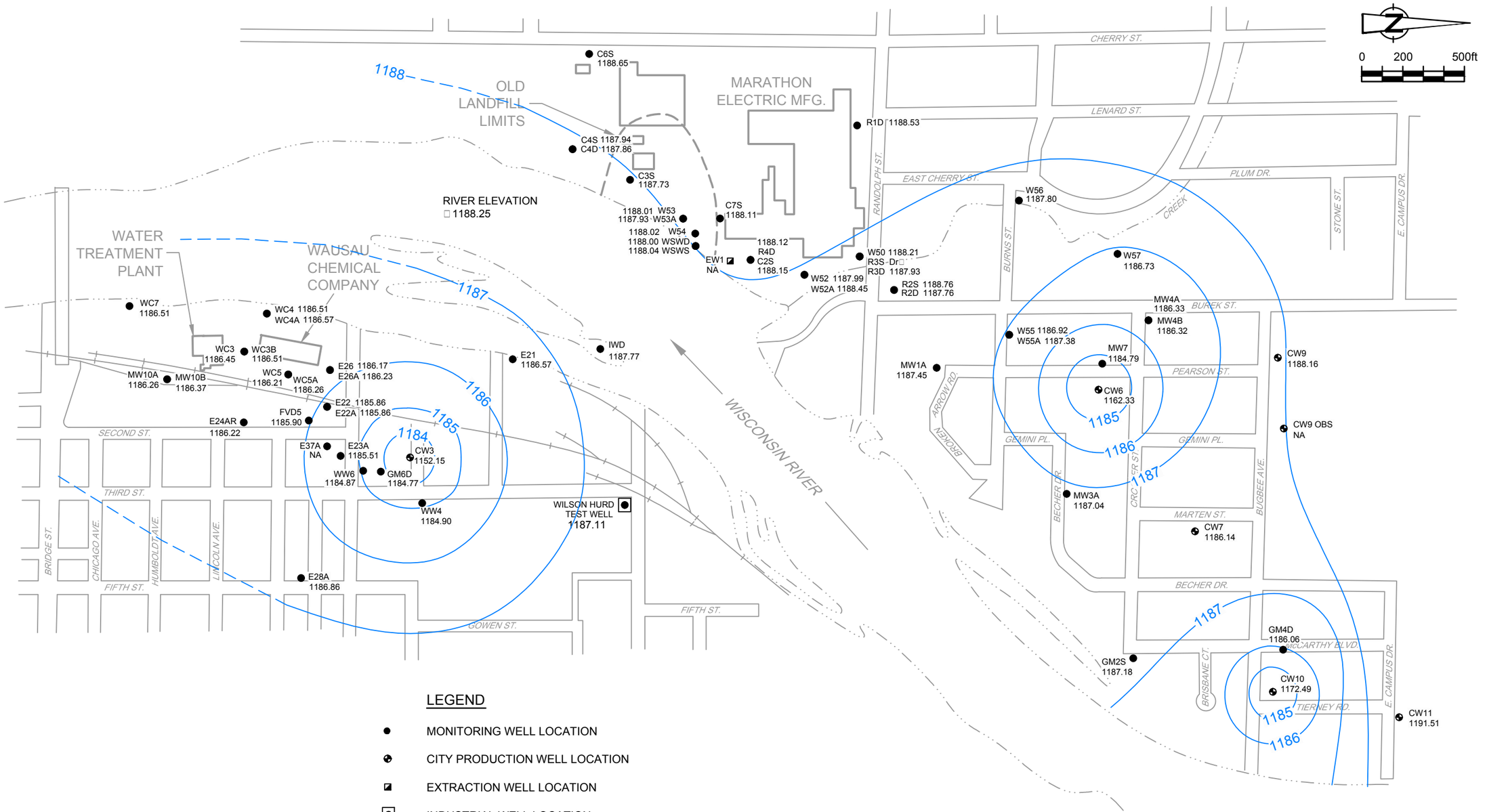
LEGEND

- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION

figure 2

GROUNDWATER ELEVATIONS
MARCH 24, 25, 2014
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

SOURCE: RMT INC. FIGURE 1, 5/14/87.



LEGEND

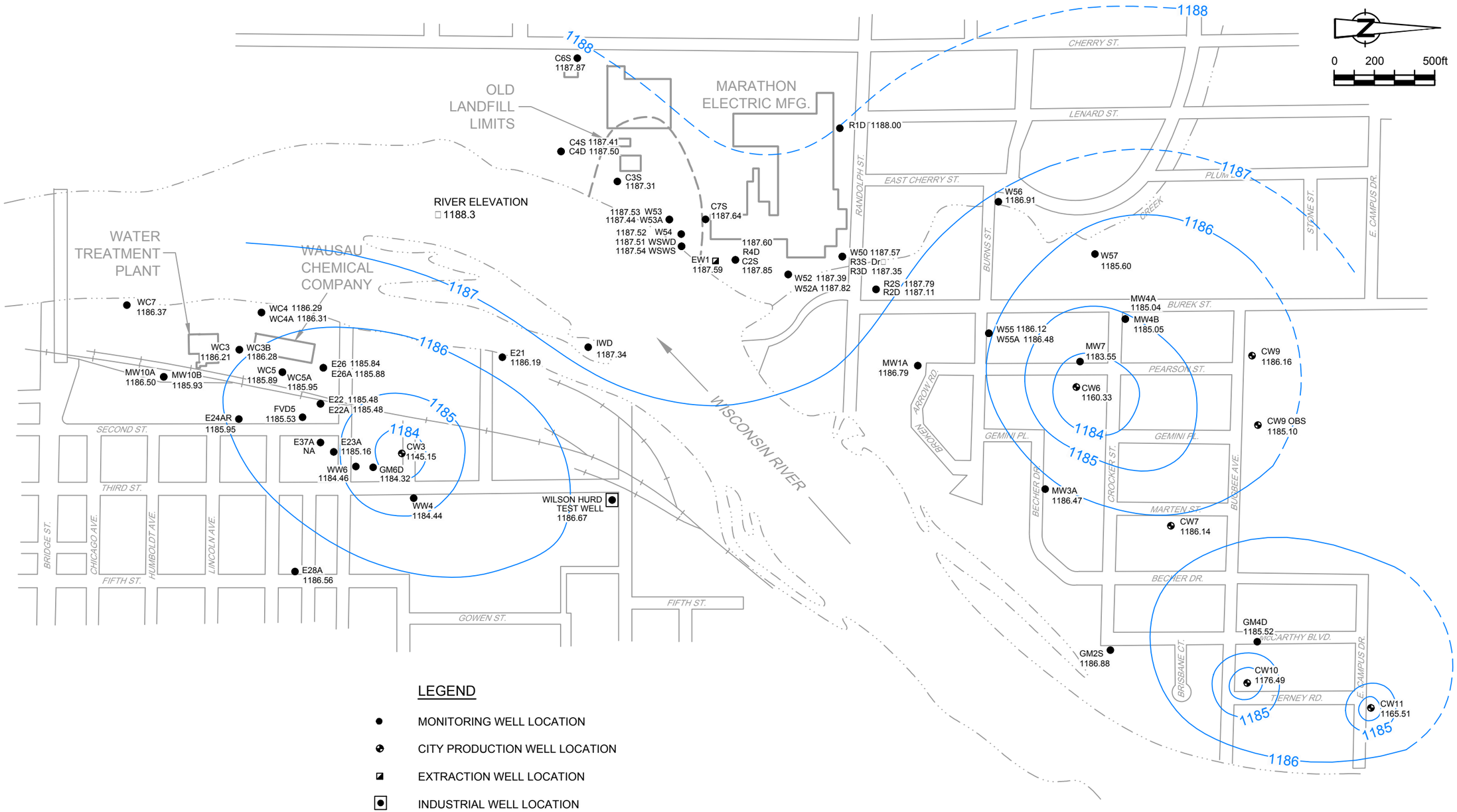
- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION

figure 2

GROUNDWATER ELEVATIONS
MAY 19, 2014
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

SOURCE: RMT INC. FIGURE 1, 5/14/87.

03978-10(BIAN031)GN-WA002 □UL 11/2014



LEGEND

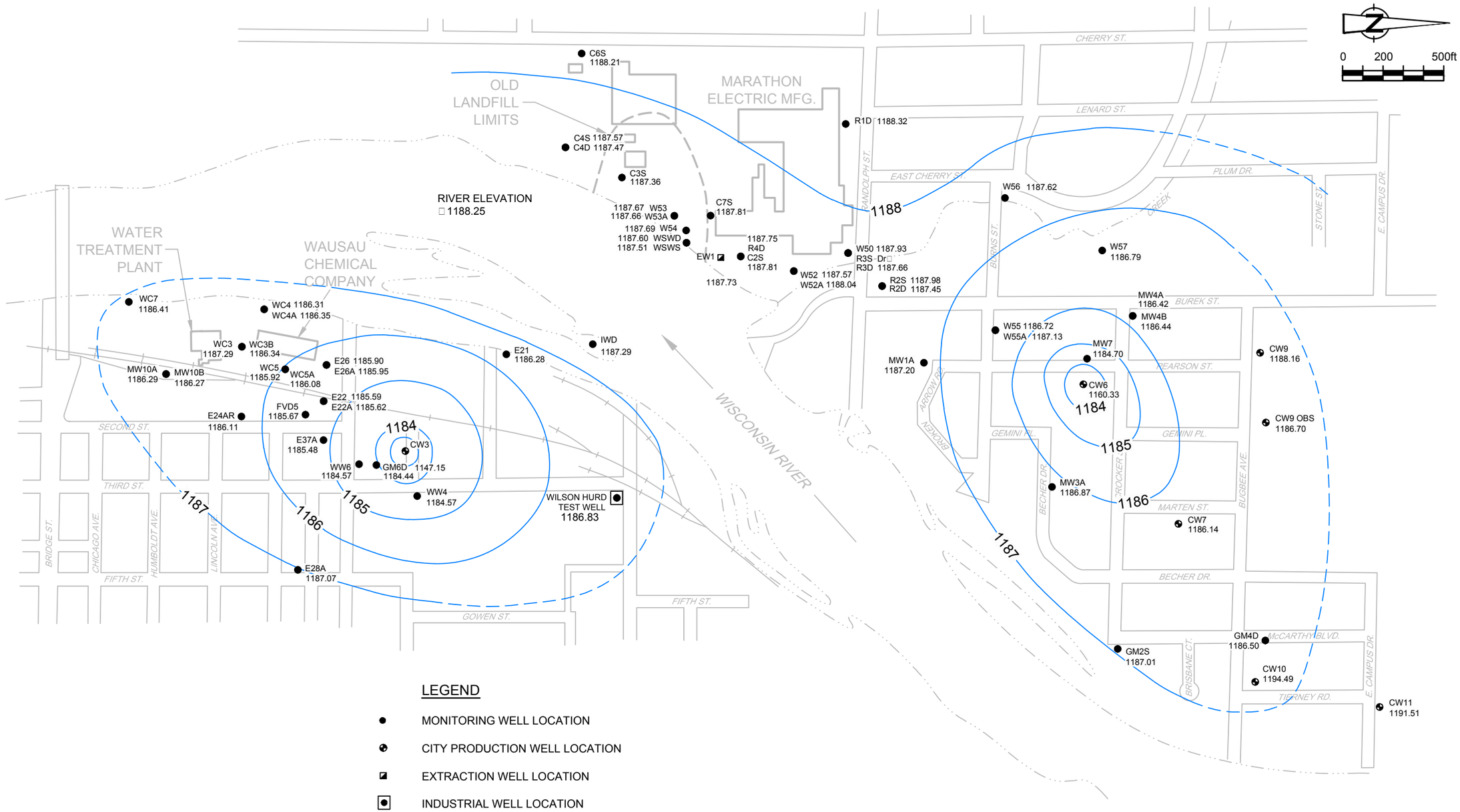
- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION

SOURCE: RMT INC. FIGURE 1, 5/14/87.

figure 2

GROUNDWATER ELEVATIONS
AUGUST 12, 2014
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

03978-10(BIAN033)GN-WA002 SEP 17/2014



LEGEND

- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION

figure 2.1

GROUNDWATER ELEVATIONS
NOVEMBER 3, 4, 2014
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

SOURCE: RMT INC. FIGURE 1, 5/14/87.

03978-00(034)GN-WA002 FEB 2/2015

Appendix F

City of Wausau Ordinances

Chapter 19.30

PRIVATE WATER WELLS

Sections:

19.30.010 Purpose. This chapter regulates the construction and continued use of private wells within the city where public water service is provided. This chapter is also intended to prevent contamination of groundwater and to protect public health, safety and welfare by assuring that unused, unsafe or noncomplying wells or wells which may serve as conduits for contamination or wells which may be illegally cross-connected to the public water system are properly abandoned. (Ord. 61-4738 §1(part), 1991.)

19.30.020 Definitions. For the purpose of this chapter:

(a) "Municipal water system" means Wausau Water Works.

(b) "Noncomplying" means a well or pump installation which does not comply with the provisions of Chapter NR 812, Wisconsin Administrative Code, in effect at the time the well was constructed, a potential contamination source was installed, the pump was installed or work was done on either the well or pump installation.

(c) "Pump installation" means the pump and related equipment used for withdrawing water from a well including the discharge piping, the underground connections, pitless adapters, pressure tanks, pits, sampling faucets and well seals or caps.

(d) "Unsafe" means a well or pump installation which produces water which is bacteriologically contaminated or contaminated with substances exceeding the standards of Chs. NR 109 or 140, Wisconsin Administrative Code, or for which a health advisory has been issued by the Department of Natural Resources.

(e) "Unused" means a well or pump installation which is not in use or does not have a functional pumping system.

(f) "Well" means an excavation or opening into the ground made by digging, boring, drilling, driving, or other methods for the purpose of obtaining groundwater for consumption or other use.

(g) "Well abandonment" means the filling and sealing of a well according to the provisions of Ch. NR 812, Wisconsin Administrative Code. (Ord. 61-5126 §1(part), 2001, File No. 01-0833; Ord. 61-4738 §1(part), 1991.)

19.30.030 Private well permit. The plumbing inspector may grant a permit to a private well owner to operate a well for a period not to exceed five years, providing conditions of this code and other applicable state and health requirements are met. An owner may request an initial or renewal of a private well permit on an application form provided by Wausau Water Works. The permit request must clearly state the purpose of the well. Applications for a new permit or to renew an existing permit submitted after July1, 2011 must include the following:

(a) A copy of a Bacteriological Analysis report from a state approved drinking water laboratory indicating the water is bacteriologically safe;

(b) A Wisconsin Department of Natural Resources Well and Pressure System Inspection form signed by a licensed well driller or pump installer certifying that the well system is in compliance with ch. NR812 requirements;

(c) A separate statement signed by a licensed well driller, pump installer, plumber, or certified cross connection inspector surveyor stating that ther are no cross connections between the well or pump system and the municipal water system;

(d) The permit application for existing wells shall be reviewed by the utility director or environmental engineer prior to the permit issuance by the plumbing inspector. Requests for permits for new private water supply wells to be constructed within the city limits shall be reviewed by the commission. (Ord. 61-5477 §1(part), 2011, File No. 11-0508; Ord. 61-5126 §1(part), 2001, File No. 01-0833; Ord. 61-5021 §1, 1999; Ord. 61-4738 §1(part), 1991.)

19.30.040 Private well abandonment. All wells located on premises served by the municipal water system shall be abandoned in accordance with the terms of this code and Ch. NR 812, Wisconsin Administrative Code, no later than one year from the date of connection to the municipal water system, unless a private well permit has been obtained by the well owner from the city as specified by this code.

All wells abandoned under the jurisdiction of this code or rule shall be abandoned according to the procedures and methods of Ch. NR 812, Wisconsin Administrative Code. All debris, pump, piping, unsealed liners and any other obstructions which may interfere with sealing operations shall be removed prior to abandonment.

An abandonment report form, supplied by the Department of Natural Resources, shall be submitted by the well owner to Wausau Water Works and the Department of Natural Resources within ten days of the completion of the well abandonment. (Ord. 61-5472 §7 (part), 2011, File No. 78-0745; Ord. 61-5126 §1(part), 2001, File No. 01-0833; Ord. 61-4738 §1(part), 1991.)

19.30.050 Penalties. Any well owner violating any provision of this chapter shall upon conviction be punished by forfeiture of not less than twenty dollars nor more than one hundred

dollars and the cost of prosecution. Each day of violation is a separate offense. If any person fails to comply with this chapter for more than ten days after receiving written notice of the violation, the municipality may impose a penalty and cause the well abandonment to be performed and the expense to be assessed as a special tax against the property. (Ord. 61-4738 §1(part), 1991.)

Chapter 19.32

SWIMMING POOLS

Sections:

19.32.010 Public—Permit required. Before commencing the installation of a public swimming pool, a permit authorizing plumbing, mechanical and drainage work shall be obtained from the plumbing inspector. The application for a permit shall be accompanied by plans and specifications together with written approval from the State Board of Health, copies of which shall be filed with the plumbing inspector. (Ord. 61-4380 §1(part), 1978.)

19.32.020 Private—Permit required. Before commencing the installation of a private residential swimming pool, a permit authorizing plumbing, mechanical and drainage work shall be obtained from the plumbing inspector. The application for a permit shall be accompanied by plans and specifications showing the following in sufficient detail:

(a) Pool dimensions and volume of water in gallons;

(b) Type and size of filter system, filtration and backwash capabilities;

(c) Pool piping layout, showing pipe sizes, valves and type of materials;

(d) The rated capacity and head at filtration and backwash flows of the pool pump in gallons per minute with size and type of motor;

(e) Location and type of waste water disposal system. (Ord. 61-4380 §1(part), 1978.)

Chapter 23.54

WH—WELL HEAD PROTECTION OVERLAY DISTRICT

Sections:

23.54.010 Purpose. The consequences of certain land use activities, whether intentional or accidental, can seriously impair groundwater quality. The purpose of the well head protection overlay district (WH) is to help protect municipal well groundwater resources from contamination by certain land use activities. This is accomplished by imposing certain land use restrictions upon the area located within the approximate groundwater recharge area of the city municipal wells. The restrictions imposed upon the property within this overlay district are in addition to the regulations governing the underlying residential, commercial, industrial or other zoning districts or any other provisions of the zoning ordinance. (Ord. 61-4988 §1(part), 1997.)

23.54.020 General provisions. (a) The regulations established by this overlay district are intended to either prohibit certain land uses that might otherwise be permitted in the underlying zoning districts or to allow certain activities as a conditional use that might otherwise be permitted in the underlying zoning district.

(b) The uses prohibited in the well head protection overlay district are activities that, as a result of normal operations or accidents, may impair groundwater quality. These prohibitions are intended to provide a reasonably high degree of assurance that, within the municipal well recharge area, discharges of contaminants into the groundwater supply will be minimized. These preventive measures are important since groundwater clean-up is often prohibitively expensive, and liability for such clean-up is often hard or impossible to establish.

(c) The uses prohibited within a well head protection overlay district are prohibited based upon the pollution experience of the individual uses, the operational methods and technology generally employed by that type of use, or the materials or products commonly handled by these uses. As the technology of identified uses changes to nonrisk materials or operational methods, the list of prohibited land uses may be amended to reflect these changes. (Ord. 61-4988 §1(part), 1997.)

23.54.030 Establishment of districts. For purposes of minimizing the potential for groundwater contamination in close proximity to the municipal wells, two zoning districts are established: The Well Head Zone A (WH-A) and the Well Head Zone B (WH-B).

(a) Zone WH-A is identified as the primary source of water for recharge of the municipal well aquifer and as the area from which groundwater contaminants are most likely to be transmitted to the municipal wells. Zone WH-A is more restrictive than Zone WH-B.

(b) Zone WH-B is identified as a secondary source of water for recharge of the municipal wells aquifer and as an area where there is a lower probability of surface contaminants reaching the municipal well fields. Zone WH-B is less restrictive than Zone WH-A. (Ord. 61-4988 §1(part), 1997.)

23.54.040 Permitted and prohibited uses. (a) Well Head Zone A (WH-A). All principal and accessory uses which are permitted uses within the underlying zoning districts are permitted within Zone A of the well head protection overlay district except the following uses, which are specifically prohibited and those uses identified as conditional uses in section 23.54.050:

(1) Areas for dumping or disposal of garbage, refuse or trash;

(2) Asphalt products manufacture;

(3) Automobile service stations;

(4) Building materials and products sales;

(5) Cartage and express facilities;

(6) Car washes;

(7) Cemeteries;

(8) Chemical processing and manufacturing;

(9) Contractor or construction shops or yards;

(10) Demolition and construction material disposal sites;

(11) Dry cleaning establishments;

(12) Electroplating;

(13) Exterminating shops or businesses;

(14) Feed and seed sales;

(15) Foundries and forge plants;

(16) Fuel and ice sales;

(17) Garages for repair and servicing of motor vehicles, including body repair, painting or engine rebuilding;

(18) Garden supply, tool and seed stores;

(19) Greenhouses and nurseries;

(20) Heavy machinery production;

(21) Industrial liquid waste storage areas;

(22) Junk yards and auto graveyards;

(23) Leather tanning or processing;

(24) Linoleum manufacturing;

(25) Machine shop;

(26) Metal reduction and refinement;

(27) Metal stamping;

(28) Mining operations;

(29) Motor freight terminals;

(30) Outdoor kennels;

(31) Paint products manufacture;

(32) Paper products manufacture;

(33) Petroleum products storage or processing;

(34) Photography studios which include the developing of film and pictures;

(35) Plastics manufacture;

(36) Printing and publishing establishments;

(37) Rubber processing or manufacture;

(38) Sewage treatment plants;

(39) Soap manufacture;

(40) Steel manufacture;

(41) Stone products manufacture;

(42) Underground petroleum products storage tanks for industrial, commercial, residential or other uses;

(43) Woodworking and wood products.

(b) Well Head Zone B (WH-B). All principal and accessory permitted uses within the underlying zoning districts are permitted within Zone B of the well head protection overlay district except those uses identified as conditional uses in section 23.54.050 and underground petroleum products storage tanks for residential use. Said tanks are specifically prohibited in Zone B. (Ord. 61-4988 §1(part), 1997.)

23.54.050 Conditional uses. (a) The following conditional uses may be allowed in the WH-A Zone subject to the provisions of Chapter 23.72:

(1) Any other business or industrial use which is not listed as a prohibited use in section 23.54.040(a) provided that the proposed use is a permitted or conditional use in the underlying zoning district.

(b) The following conditional uses may be allowed in the WH-B Zone subject to the provisions of Chapter 23.72:

(1) Underground petroleum products storage tanks for industrial, commercial or other nonresidential uses;

(2) Any business or industrial use provided that the proposed use is a permitted or conditional use in the underlying zoning district.

(Ord. 61-4988 §1(part), 1997.)

23.54.060 Nonconforming uses. Any lawfully existing building, structure or use which does not conform to the regulations of a mapped well head protection overlay district may be continued subject to the following provisions:

(a) For nonconforming buildings, structures or uses which were nonconforming prior to being designated as part of a well head protection overlay district, the regulations in Chapter 23.70 apply.

(b) For nonconforming buildings, structures or uses which are made nonconforming through establishment of a well head protection overlay district, the regulations identified in Chapter 23.70 also apply; however, these regulations may be modified to meet the particular circumstances

4768 §1, 1992; Ord. 61-4753 §1, 1991; Ord. 61-4714 §1, 1990; Ord. 61-4711 §1, 1990; Ord. 61-4709 §1, 1990; Ord. 61-4703 §1, 1990; Ord. 61-4688 §1, 1989; Ord. No. 61-4679 §1, 1989.)

1.01.027 Providing inspectors with the ability to issue citations. The director of inspections and electrical systems, the building inspector, the plumbing inspector, the electrical inspector, the property inspector, the director of public works, the fire chief, and the police chief, and any employee within the table of organization of the department of public works specifically delegated with this citation authority by the director of public works, and any employee within the table of organization of the fire department specifically delegated with this citation authority by the fire chief, and any employee within the table of organization of the police department specifically delegated with this citation authority by the police chief, are given the authority, pursuant to the provisions of Section 66.0113 of the Wisconsin Statutes, to issue citations for violations of ordinances directly relating to their official responsibilities. (Ord. 61-5106 §1, 2001, File No. 89-0425; Ord. 61-4784 §1, 1992; Ord. 61-4710 §1, 1990; Ord. 61-4680 §1, 1989.)

1.01.030 Reference applies to amendments. Whenever a reference is made to this code as the Wausau Municipal Code or to any portion thereof, or to any ordinance of the city, the reference shall apply to all amendments, corrections and additions heretofore, now, or hereafter made. (Ord. 61-4113 §3, 1968.)

1.01.040 Codification authority. This code consists of all of the regulatory and penal ordinances and certain of the administrative ordinances of the city, codified pursuant to Section 66.0103 of the Wisconsin Statutes. (Ord. 61-4113 §4, 1968.)

1.01.050 Definitions. The following words and phrases whenever used in this code shall be construed as defined in this section unless from the context a different meaning is intended, or unless a different meaning is specifically defined and more particularly directed to the use of such words or phrases:

(a) "City" means the city of Wausau, Wisconsin, and such territory outside of this city over which the city has jurisdiction or control by virtue of any constitutional provisions, or any law;

(b) "Common council" means the common council of the city;

(c) "Mayor" means the mayor of the city;

(d) "County" means the county of Marathon;

(e) "Fiscal year." The calendar year shall be the fiscal year;

(f) "Person" means any natural person, firm, association, joint venture, joint stock company, partnership, organization, club, company, corporation, business trust, or its manager, lessee, agent, servant, officer, or employee or any of them;

(g) "Oath" includes affirmative;

(i) "Office." The use of the title of any officer, employee, or any office, or ordinance shall mean such officer, employee, office, ordinance of the city, unless otherwise specifically designated;

(j) "State" means the state of Wisconsin;

(k) "Shall" and "must." Each is mandatory;

(l) "May" is permissive;

(m) "Written" includes printed, typewritten, mimeographed or multigraphed. (Ord. 41-4113 §5, 1968.)

1.01.060 Grammatical interpretation. The following grammatical rules shall apply in this code:

(a) Gender. Any gender includes the other genders;

(b) Singular and plural. The singular number includes the plural and the plural includes the singular;

(c) Tenses. Words used in the present tense include the past and the future tenses and vice versa;

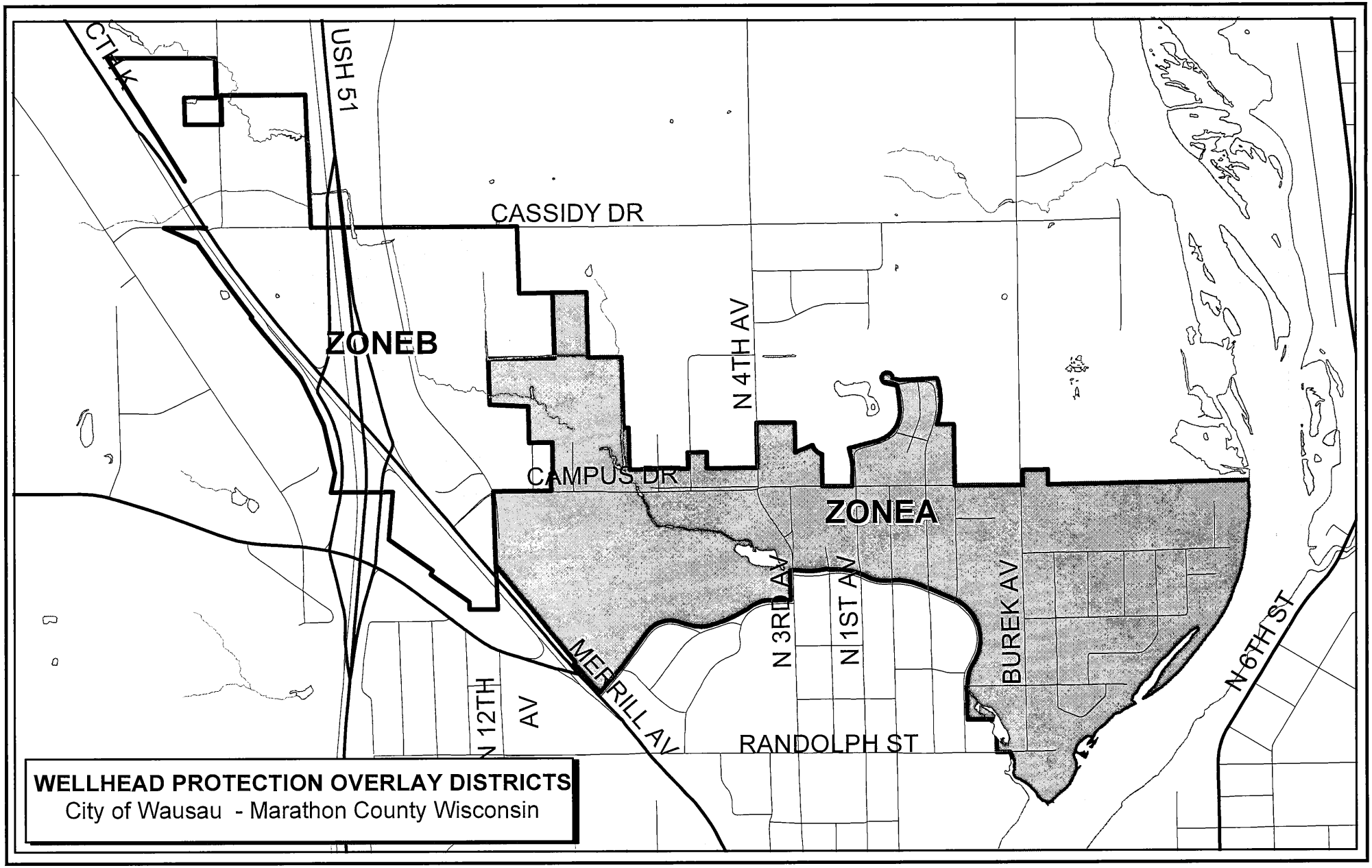
(d) Use of words and phrases. Words and phrases used in this code and not specifically defined shall be construed according to the context and approved usage of the language. (Ord. 61-4113 §6, 1968.)

1.01.070 Construction. The provisions of this code and all proceedings under it are to be construed with a view to effect its objects and to promote justice. (Ord. 61-4113 §7, 1968.)

1.01.080 Title, chapter and section headings. Title, chapter and section headings contained herein shall not be deemed to govern, limit, modify or in any manner affect the scope, meaning or intent of the provisions of any title, chapter or section hereof. (Ord. 61-4113 §8, 1968.)

1.01.090 Reference to specific ordinances. The provisions of this code shall not in any manner affect deposits or other matters of record which refer to, or are otherwise connected with ordinances which are therein specifically designated by number or otherwise and which are included within this code, but such reference shall be construed to apply to the corresponding provisions contained within this code. (Ord. 61-4113 §9, 1968.)

1.01.100 Effect on past actions and obligations. Neither the adoption of this code nor the repeal or amendments hereby of any ordinance or part or portion of any ordinance of the city shall in any manner affect the prosecution for violations of ordinances, which violations where committed prior to the effective date hereof, nor be construed as a waiver of any license, fee, or penalty at said effective date due and unpaid under such ordinances, nor be construed as affecting any of the



WELLHEAD PROTECTION OVERLAY DISTRICTS
City of Wausau - Marathon County Wisconsin